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*Donald C. Haggis,
Carla M. Antonaccio (Eds.)*

CLASSICAL ARCHAEOLOGY IN CONTEXT

THEORY AND PRACTICE IN
EXCAVATION IN THE GREEK WORLD

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Theory and Practice in Excavation in the Greek World

Edited by
Donald C. Haggis and Carla M. Antonaccio

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List of Contributors

Alexandra Alexandridou

Chargée de Recherches F.R.S.-FNRS
Centre de Recherches en Archéologie et
Patrimoine
Université libre de Bruxelles, CP 175
Avenue F.D. Roosevelt, 50
B-1050 Bruxelles

Carla M. Antonaccio

Professor of Classical Archaeology
Department of Classical Studies
Box 10903
Duke University
Durham, NC 27708

Chryssi Bourbou

Bioarchaeologist
Ephorate of Antiquities of Chania
Hellenic Ministry of Culture
Sourmeli 24
73100 Chania, Crete

Kostis S. Christakis

The Sanctuary of Hermes and Aphrodite at Syme
Viannou Project
Archaeological Society at Athens
Institute for Aegean Prehistory Study Center for
East Crete
J. Psyhary 18
71305 Heraklion, Crete

Jamieson C. Donati

Postdoctoral Researcher
Institute for Mediterranean Studies
Laboratory of Geophysical-Satellite Remote
Sensing and Archaeoenvironment
Melissinou and Nikephorou Foka 130
74100 Rethymno, Crete

Kalliope E. Galanaki

Archaeologist
Ephorate of Antiquities of Herakleion
Hellenic Ministry of Culture
Aretes Nioti and Skordilon 24
71202 Herakleion, Crete

Andreas Georgopoulos

Professor of Photogrammetry
Laboratory of Photogrammetry
School of Rural and Surveying Engineering
National Technical University of Athens
9 Iroon Polytechniou
15780 Zographos, Athens

Donald C. Haggis

Professor of Classical Archaeology
Department of Classics
The University of North Carolina at Chapel Hill
212 Murphey Hall, CB 3145
Chapel Hill, NC 27599-3145

Tamar Hodos

Senior Lecturer
Department of Archaeology and Anthropology
University of Bristol
43 Woodland Road
BS8 1UU Bristol

Konstantinos Kalođeropoulos

Ph.D. Candidate in Archaeological Theory
University of the Aegean
Department of Cultural Technology and
Communication
University Hill
81100 Mytilene

Athanasia Kyriakou

Laboratory Teaching Staff
Department of Archaeology
Aristotle University of Thessaloniki
54124 Thessaloniki

Anna Lagia

Freelance Anthropologist
Wasagasse 33/25
1090 Vienna

Evi Margaritis

Adjunct Assistant Professor, Cyprus Institute
Marie Curie Post-doctoral Fellow
McDonald Institute for Archaeological Research
University of Cambridge
Downing street
CB2 3ER Cambridge

Dimitra Mylona

The Kalaureia Research Program, Swedish
Institute at Athens
Institute for Aegean Prehistory Study Center for
East Crete
E. Daskalaki 59
74100 Rethymnon, Crete

Christina Papadaki

Ph.D. Candidate, University of Athens
Contract Archaeologist
Ephorate of Antiquities of Herakleion
Hellenic Ministry of Culture
Arete Nioti and Skordilon 24
71202 Herakleion, Crete

David B. Small

Professor of Anthropology
Department of Sociology and Anthropology
Lehigh University
681 Taylor Street
Bethlehem, Pennsylvania 18015-3169

Manolis I. Stefanakis

Associate Professor in Classical Archaeology
and Numismatics
University of the Aegean
Department of Mediterranean Studies
Demokratias 1
85100 Rhodes

Alexandros Tourtas

Archaeologist, Ph.D. Candidate
Aristotle University of Thessaloniki
School of Architecture
Cholomontos 24
54351 Thessaloniki

James Whitley

Professor in Mediterranean Archaeology
School of History, Archaeology and Religion
Cardiff University
John Percival Building
Colum Drive
Cardiff
CF10 3EU Wales

Donald C. Haggis and Carla M. Antonaccio

1 A Contextual Archaeology of Ancient Greece

The Definition of Greek Archaeology

This book began as a conversation developing out of an advanced graduate seminar on the archaeology of Early Iron Age Greece that we occasionally co-teach, drawing students from departments of art history, religion and classics at both Duke and Chapel Hill. The class afforded us several opportunities to reflect on how we understand, define, and teach Greek archaeology. In particular, we have become increasingly conscious of the difficulties in trying to introduce to our students a rapidly expanding body of data, and a constantly changing archaeological landscape, when textbooks and synthetic studies are still ensconced in sites, material, and even research problems defined initially in the first half of the twentieth century. Another problem was the apparent lack of critical evaluation of the material and contextual basis for applications of current theory. That is to say, we could teach standard works and current theoretical and quantitative studies, but we found that a deconstruction of field methods and contexts, and even the study of new material, tended to transform, if not utterly undermine, the dominant narratives that have somehow codified our research questions. The better we understood archaeological contexts, the more complicated and open-ended the questions became, and the more difficult it was to stay with both traditional and current narratives. Although this proved endlessly satisfying for our students, who are learning to read critically, it also revealed an increasing conceptual distance between narrative and context in classical archaeology.

Thus, our frustration was not with the lack of quantifiable data, or the inherent limitations and constraints of new theory or old-fashioned research questions—both are valid and interesting—but with an apparent lack of a cognizance of field practices and the process of constructing archaeological contexts. That is, we have become aware of the “theoretical fragmentation” of the field of Greek archaeology—in Lucas’s sense, the disconnection between various components of the archaeological process (Lucas 2012, 17). We have also noticed in publications only a tacit acknowledgment of the potential impact of the full range of material components comprising those archaeological contexts. It seemed to us that classical archaeologists have become more comfortable with ideas, and strands of discussion and debates, than with the material itself, while in effect teaching a new generation of students that theory is more important than field practices. In short, we end up training students to think that material patterns deductively derived from publication are more important than a critical understanding of what those data actually are or where they came from. Our conclusion was that classical archaeologists have gradually become complacent about notional and finite datasets, and our largely conceptual understanding of them,

while acquiescing to the idea that large-scale excavation—or studying thousands of potsherds—is simply too difficult, time-consuming, expensive, or of negligible intellectual importance or professional benefit. The mantra of the twenty-first century is that we have done enough fieldwork, found enough stuff, know what it is, and now we simply need to sit back and think about what it all means, while dissuading our students from taking on ambitious fieldwork and the study of primary assemblages for dissertations and field research. It may be important to note that this new pragmatic consensus ironically originates with a generation that actually did a lot of fieldwork, studied a lot of artifacts, and introduced a new range of contexts and assemblages at our disposal. Furthermore, while the modern socioeconomic context of archaeological practice has now directly affected how we work in the field, the trend leading us away from the archaeology itself has many causes, including a dearth of funding for significant fieldwork; the complexities getting permits; reporting requirements of granting bodies and universities; and constraints on the labor expected of students.

As archaeological theory has become more firmly rooted in a variety of discourses in classical archaeology, we find a noticeable shift from established master narratives to more fluid and rapidly changing interpretive structures (cf. Small; Whitley, this volume). Even so, we have also begun to center our critical discussions on the intellectual history and merits of various theoretical applications, while being less concerned really with the material itself, or the critical interrogation of the material patterns we construct from publications. As a result, students in many programs are no longer obliged to do fieldwork; to learn, study, document, and publish actual artifacts and stratigraphy (especially from recent or current excavations or surveys); or even to consider that the material basis of our interpretations consists of limited and biased samples, a product of the unique conditions of cultural processes, taphonomy, and methods of recovery, study and publication. At the same time, publishers in North America eschew dense, complicated, heavily illustrated, and costly excavation reports, while tenure and promotion committees in universities give weight to monographs instead of complicated multiple-authored final publications of field projects, or even descriptive studies of landscapes, sites, assemblages, or artifacts—sometimes called derisively, “catalog dissertations.” As a consequence, our students (and we as archaeologists) are becoming intellectually distanced from the actual material components of archaeological context, and the implications of the archaeological record itself. Even the commonplace use of digital technology for spatial analysis, documentation, “visualization,” and reconstruction, though increasing speed and accuracy of recording and illustrating, has inadvertently separated us from the physical, intimate, and immediate experience of the excavation process itself (Huxley 2006, 3).

The prevalent ambivalence about archaeological context—the critical study of artifacts and ecofacts, matrices, features, and their unique spatial and temporal associations—may also stem from yet a bigger problem in defining classical Greek archaeology as a coherent discipline. Lacking a unified intellectual mission, or even a reasonably discrete set of goals, methods, and generally accepted principles, Greek

archaeology as field of study also has no neatly definable methodological, chronological, geographical, cultural, and material boundaries. (We find precisely the same problem in shaping graduate curricula and dissertation research as we do with characterizing archaeological research). At the 16th International Congress of Classical Archaeology (Mattusch, Donohue, and Brauer, eds., 2006), George Huxley (2006) presented an eloquent and compelling vision for the field, one that embraces intellectual diversity and a sensitivity to archaeological landscapes, while eschewing overspecialization. Whether or not the 140 papers in the proceedings of that particular conference—its title (*Common Ground: Archaeology, Art, Science, and Humanities*) notwithstanding—reflect any kind of unifying humanistic vision that Huxley would advocate, they certainly represent the complex and diverse directions of the discipline.

Indeed in this era of “summing things up,” various attempts to define the current disposition of the field end up, as we would expect, presenting not-quite-overlapping and sometimes conflicting perspectives on what classical Greek archaeology actually is (e.g., Osborne 2004; Huxley 2006; Snodgrass 2007; Voutsaki 2008; and see Antonaccio; Whitley; and Hodos, this volume). Moreover, it is interesting that in the current avalanche of reductive handbooks and companions produced over the past decade, there has been no attempt to devote an entire volume to Greek archaeology—though archaeologists have contributed to works focusing on various classical themes or culture-periods (e.g., Whitley 2009). There is but one English-language field archaeology handbook written by classical archaeologists (Bowkett et al. 2001). And perhaps more to the point, outside of Greece, there is still no mainstream academic journal devoted exclusively to Greek archaeology—as archaeology, rather than history, epigraphy, art history, or something in between (Haggis 2008).

The recent collaborative effort, *Classical Archaeology* (Alcock and Osborne, eds., 2007), comes closest to an overview of the field in a single book. In its attempts to be concise and comprehensive (and comprehensible to students, evidently its original audience), it constructs a paratactic arrangement of idiosyncratic views of Greek and Roman topics, derived from interesting snippets of current discourses—diverse individual voices rather than unified threads or approaches. What this could mean is that unlike cognate fields of Greek history, Greek art, and Greek literature, whose practitioners are comfortable with their intellectual identity, goals, methods and directions—indeed also confidently inserting archaeological material into social- or culture-history narratives (e.g., Morris 1998, 2000; Scott 2010; Neer 2010; Hall 2014)—for field archaeologists, the discipline defies such easy integration of data, and reductive material and intellectual definition. Finally, a comparison of the most recent English-language undergraduate textbooks on Greek archaeology (Whitley 2001; Mee 2011; Bintliff 2012; Neer 2012) is a study in contrasts, demonstrating little uniformity in methods, theory, perspective, or even chronology or datasets (cf. Snodgrass 2007, 17), which many students find perplexing to say the least. One wonders, in this context, about the influence of Aegean prehistory (actually included in some of these textbooks, but not all), which is today similarly unconstrained methodologically and

materially (Terrenato 2002, 1107; Whitley 2009; cf. Snodgrass 2007; Voutsaki 2008). In North America, because of the cultural and regional proximity (and departmental location in classics), Aegean prehistory may have had the effect of tugging classical Greek archaeologists away from traditional paradigms of classical studies and ancient history, moving the field into the realm of archaeology as a transcultural endeavor—that is, to put it simply, posing archaeological questions and using archaeological data and methods to answer them. The success of these various textbooks, however, may in fact be the very diversity of approaches that make them seem so different—one way of defining Greek archaeology could, therefore, be in these intellectual divergences, encouraging numerous parallel and sometimes overlapping discourses. Snodgrass's (2007, 17) observation of the common criticism of the field is somewhat different: because Greek archaeology was for most of its history a study of objects and classes of material, it had “become a self-contained, even hermetically sealed, branch of scholarship...” Though his conclusion on what the field has become actually emphasizes this diversity of perspectives and approaches to wide-ranging problems (14; cf. Terrenato 2002).

Parallel Discourses

If it still hard to define Greek archaeology in a way that everyone can agree on, we can identify two strands of work that are still going strong. One is the continuing practice of excavation and publication, a lot of which appears digested annually in the *Chronique des fouilles en ligne* (École Française d'Athènes) combining compilation efforts of the British School and French School at Athens and the Greek Archaeological Service. While engendering its own conversations on typology, context, and regional if not site-specific site histories, fieldwork in Greece over the past two decades has progressed at an alarming pace and produced remarkable new data, while encouraging broad international participation (e.g., Stamatopoulou and Yeroulanou 2002). The proliferation of periodic regional conferences emphasizes the volume of this activity and the continuing commitment to speedy publication (e.g., Διεθνές Κρητολογικό Συνέδριο; Αρχαιολογικό έργο στη Μακεδονία και Θράκη [Thessaloniki]; Αρχαιολογικό έργο Θεσσαλίας και Στερεάς Ελλάδας [Volos]; Επιστημονική Συνάντηση για την Ελληνιστική Κεραμική [Ioannina]; Διεθνές Συνέδριο Πελοποννησιακών Σπουδών [Athens]; Παγκρήτια Επιστημονική Συνάντηση για το Αρχαιολογικό Έργο στην Κρήτη [Rethymnon]). The second strand is equally international in origin, but fueled in large part by Anglo-American theoretical and methodological work moving in a variety of important directions (e.g., Morris, ed., 1994; Spencer, ed., 1995; Shanks 1999; Alcock 2002; Marconi 2007; Owen and Preston, eds., 2009). The former participants are ensconced in the recovery, description, documentation, and definition of new sites and new forms of archaeological material, while the latter are asking new questions

mostly (but not entirely) of old material, requiring their readers to rethink the ways that we normally use established datasets and a circumscribed research universe. If the present collection of papers has any methodological prescript or implicit agenda it is that we need to re-center our focus on context as a means of reconnecting these two thriving but divergent directions in the field, and shift our analytical focus to materialization as a process of context formation (Lucas 2012).

Within the past two decades new surveys of the classical world have been written mostly by historians and classicists, drawing heavily on archaeology, and unfortunately co-opting and reaffirming the temporal, geographical, and methodological boundaries of the field (e.g., Fisher and van Wees, eds., 1998, ix), while the archaeologists themselves may be moving in other directions entirely. Similarly, as already mentioned above, numerous handbooks, companions, and edited volumes in classical studies have tried on occasion to summarize the state of classical archaeology, focusing by and large on broad research questions, the application of theory, and the implications of recent trends in the study of specific kinds of sites or cultural contexts. To be sure, such overviews show useful and sophisticated approaches to Greek society in various systemic contexts (complexity, gender, identity, ethnicity, political economy, and colonization, and so on). But our compulsion to sum up the state of things has become somewhat reductive, and also a bit presumptuous. In the very least, the tendency to privilege certain research questions engenders a kind of complacency in our understanding of the material and contextual basis of those questions, and in the end, deemphasizes entire fields in our broader frame of reference—such as geoarchaeology, bioarchaeology, archaeobotany and palaeoethnobotany, zooarchaeology, and historical ecology (e.g., Morris, ed., 1994; cf. Foxhall, Jones, and H. Forbes 2007)—which are now at the core of our interpretation of mortuary, domestic, and cult contexts in the classical Mediterranean (see e.g., Haggis; Lagia; Margaritis; Mylona; Stefanakis et al., this volume).

Osborne and Alcock (2007, 3) reassure us: “...in general our knowledge of the material culture of the Greek and Roman worlds is now so firmly based that we can readily answer questions of what an object, an assemblage, or a site is. The hard questions which classical archaeology still has to face up to are questions about how objects relate to each other and above all to people.” While we remain unconvinced that these really are the “hard questions” of classical archaeology, we would agree of course that this is generally a move in the right direction, taking us beyond documentation, as it were, and forming an antidote to traditional modes of scholarship that privileged particular classes of artifacts from particular sites, regions, or culture-periods (cf. Snodgrass 2007). But even so, the recent trends in scholarship that are given to wide-ranging syntheses seem to take for granted a static, representative, and adequately-studied material basis for work in the field. In the library and classroom, we weary of tediously detailed descriptions of archaeological sites and seemingly redundant catalogues of buildings, pottery, metals, and whatnot (as in Terrenato 2002)—anxious to engage the more satisfying conversations about pat-

terns and meaning—but we are also perhaps unconsciously leading ourselves away from engagement with the archaeology itself. It is not that some archaeologists are careful scholars, and others are not; or that some are “dirt” archaeologists and others are “sculpture people” or “theory people.” It is rather that the “data” have somehow emerged as a kind of conceptual and circumscribed construct: finite sources and categories of archaeological material that we have already defined, and implicitly know and understand. Our task then is simply to compile published field reports, recognize and draw out whatever we think are the significant examples or critical bits of information, and then arrange them into neat patterns or constructs that are relevant to our use of theory or historical argument. Thus, all we need now are clever methodologies or extensive knowledge of relevant ancient texts to explain what it all means and to develop more (and more sophisticated) research questions that integrate and engage this circumscribed body of material.

A generally similar and equally puzzling sentiment is at the core of a recent collection of papers in *Archaeological Dialogues* summarized by John Cherry in the aptly titled article “Still not digging, much” (2011, 10): “The organizers of this forum have raised two main problems: first, the exponentially growing number of excavations, many of them (allegedly) merely adding to the mountain of data on types of site, periods, or regions we already know well; and second, the glaringly obvious fact that many of them are not being published adequately, if at all.” The assumption here and above that new “data” are merely redundant is neither terribly useful nor immune from critical debate. And, of course, if we understand “data” to mean the diverse components of archaeological context, then we must also recognize that any given archaeological context (because of factors of cultural geography, scale of analysis, chronology, taphonomy, and excavation methods) are essentially unique interpretive constructs, rather than objectively defined and absolute conditions or physical entities. It should follow that strictly speaking no new data in archaeology can be truly redundant (see esp. Margaritis; and Kyriakou and Tourtas, this volume). Ironically, the only things that may be actually redundant (or at least self-replicating) are how we conform to paradigms of interpretation, and how we are accustomed to using those data. But straightforward logic aside, the point also brings to the forefront the central problem of a dominant discourse that consciously or unconsciously limits and circumscribes the research universe and its various material components—both the substance and the character of the archaeological record itself. While the recurring statement of the problem of “too much digging and not enough thinking,” is a relatively recent idea, an unintended consequence may be that we are implicitly urged to take for granted that the various processes of recovery have created notionally static, if not conceptually complete, datasets that are broadly and equally applicable to wide ranging interpretative frameworks. Finally, this idea also should logically assume that variables of sampling, and aims and conditions of study and publication, are ultimately not that important anymore to the broad-based theorizing on social and economic history, or on cultural process and production.

In general, this kind of thinking is predicated on a number of things. The first is the nature of the data at our disposal, and our apparent inability to control or fully understand variables of sampling or context in excavation data that have been incompletely studied or inadequately published, and mostly from projects conducted decades ago. On the one hand, the data are what they are and what we have, so we are just compelled to deal with them; and on the other, it is just too much trouble (or in some cases, impossible) to try to go back and study the artifacts or to reconstruct the excavation context. Second, relatively few of the practitioners of classical archaeology have actively conducted archaeological excavation, if at all, in contexts pertinent to their theoretical interests or synthetic narratives, while historians and classicists, for the most part, have simply adopted archaeological material however it suits them. Third, the high cost and complicated logistics of conducting fieldwork in a post-colonial world (and within institutions and agencies which are no longer willing to invest in major fieldwork projects) often discourage or preclude active engagement with new sites, culture regions, and large-scale samples, which should be an important catalyst for reevaluating both data and research questions (see Stefanakis et al., this volume). Finally, there is the impact of the phenomenon of the salvage dig, emergency interventions occasioned by looting, infrastructure construction, legal and illegal development, all of which divert resources and agendas. The effect of this trend away from establishing a new research universe is ultimately as constraining as the traditional institutional bias of the old “big digs,” which, at least among the foreign schools in Greece, still guides the training and intellectual direction of many classical field archaeologists in Europe and the United States.

As emphasized above, there is a prevailing notion that new excavation and the study of new material merely provide more examples of things that we already understand—and thus, in most circumstances, are relevant only to narrowly defined technical debates about chronology, typology, or specific site histories. Furthermore, the diverse academic cultures of communication and publication may in fact determine whether or not we actually use this new data, even if we know of its existence: culture-period subfields; material specialties; national research agendas; replicating systems of academic promotion; and even knowledge of academic languages affect our narratives and how we study and integrate data. Neither the process of collecting new data, nor for that matter the reevaluation of long-established definitions of artifacts, sites or contexts, is thought to inflect, let alone redirect, our broad theoretical concerns, which have, in a way, taken on separate lives of their own. We have become so comfortable with (or committed to) our own narratives and the limited dataset that we are accustomed to using, that there may be some reticence to complicate the issue with new material, sites, or contexts, and what excavators actually say about them. This bounded research universe has disengaged us from the idea that new archaeological material, even if readily recognizable, has meaning because of its context; and that new contexts, being intrinsically unique, should inform or transform the meanings that we have attributed to patterns of objects and assemblages. In practice, we

might not be reading excavation reports in their entirety, but rather scanning them to look for relevant bits of material or discrete assemblages that we can recognize as fitting some preconceived idea or established pattern. And in this, we are not deprecating a deductive approach; we are only saying that this disengagement from context steers us away from context- or site-specific problems, or facing the overwhelming complexities of the data, and the obligation and benefits of interrogating the vast array of material at our disposal. In general, the structure of our current narratives may be inadvertently limiting the realm of contextual frameworks for asking new and different archeological questions.

We are not promoting an exclusively inductive approach to Greek archaeology or arguing that every new excavation, survey, or sampling strategy will automatically yield radically new ideas, research problems, and directions. We mean only that the physical recovery and intensive study of context are active interpretive and intellectual processes that should lead to new archaeological questions, not merely add to the mountain of uniform data at the disposal of colleagues engaged in writing theory or history, or books on architecture, vase painting, and sculpture—or worse, books on the practice of applying theory, or the pitfalls or benefits of writing history with archaeology. To be clear, we are neither advocating a return to positivism or materialist perspectives as an ideological reaction to postprocessualism nor new processual mandates to refine the rules of field practices—the latter still has way too many proponents. Finally, we are also not staking a claim to some kind of academic or intellectual identity (as in Olsen et al. 2012, esp. 60–61). If there is an argument in this book, it is merely that fieldwork, new material, and the critical evaluation of the results of fieldwork, are still essential in developing new knowledge in Greek archaeology (cf. Huxley 2006, 5).

Recent trends in classical archaeology, at times both positive and exciting, may have failed to engage the more basic question of what the archaeological record actually is, or teach this to our students. We need to remind ourselves that the archaeological record is not a static condition of published excavations, such as previously investigated, well-known, or historically-documented sites; nor is it made up of discrete datasets that have become codified in the discourse because of the sociopolitical conditions of recovery, the spectacular character of the finds, or their convenient fit in a dominant model or popular theoretical discourse. The archaeological record is a fluid, dynamic, and open-ended construct born of *archaeological practice*, formed initially by excavators, but also from an on-going dialectic between investigators, sites, assemblages, objects, and a myriad of analytical and theoretical frameworks. In Lucas's terminology these would be artifacts (material culture), residues (formation processes), and sources (fieldwork) (Lucas 2012, 10). Each of these components—the excavator, researcher, the sample of things, and research questions and theoretical applications—represents constantly interacting and changing variables that define the archaeological context and ultimately the archaeological record at discrete moments in the process of investigation and in the history of the practice. This is

nowhere more apparent than in Greek archaeology with its intrinsic lack of disciplinary rules and identity, as discussed above. In this sense, classical archaeology, with its burdensome heaps of material, and divergent and multilateral discourses, should not be an intellectual outlier in a global archaeological discourse (as it is construed by our colleagues in anthropology), but rather a conceptual model or parable of what archaeology actually is as a field and discipline. Classical archaeology may simply have more material, more complex chronological, cultural, geographic frameworks, and more diverse intellectual identities and directions.

The Central Role of Fieldwork

As we have suggested above, Greek archaeology as a sub-discipline of classical archaeology may be exceptional, and remains difficult to define because of the diversity of goals, methods, material and cultural specialties of its practitioners, and equally diverse strands (and deep history) of the intellectual development of the field (see e.g., Whitley, this volume). While we generally acknowledge the home of Greek archaeology within fields of classical studies, art history and archaeology—though still bound historically and administratively to academic departments of classics and art in North American institutions—in the past three decades, varied approaches to Greek material culture have been influenced by history and art history, as well as anthropology, prehistory, and world archaeology—to say nothing of the national practices of archaeology in the home countries where the data is actually produced (see esp. Whitley; Lagia, this volume). The resultant open-ended discussion that we refer to above is largely unconstrained by methodological agendas or restrictive paradigms, and to some extent, has reshaped the way classical archaeologists study and visualize material patterns, adapting to various interpretive frameworks common in other disciplines (e.g., culture history, processual, postprocessual, and post-colonial theory). We accept that such approaches have also steered us to new ways of construing the meaning of assemblages and sites; encouraged new recovery and analytical techniques; and transformed our understanding of the social contexts of households, mortuary practices, urbanization and state formation, colonization and diaspora, cultural hybridity, and cultural landscapes.

Greek archaeology thus may have finally emerged in line with archaeology at large in both practice and theory, indicating the relevance and indeed the importance of culturally- or historically-specific contexts of the Greek world to broader theoretical and cross-cultural discourses on city states, urbanization, political economies, rural structures, and modes of sociopolitical organization and interaction within complex societies (Snodgrass 2007, 29; Voutsaki 2008, 22). While it may be true that North American anthropologists are still reluctant to use classical archaeology at all in their broad theorizing (Terrenato 2002), books that incorporate a classical Greek

perspective have become more frequent in the past two decades, especially in areas of urbanism (e.g. Storey, ed., 2006; Marcus and Sabloff, eds., 2008; Creekmore and Fisher, eds., 2014); city-states (Nichols and Charlton, eds., 1997); colonization (Hurst and Owen, eds., 2005); intra-settlement structure (Birch, ed., 2013); domestic space (Allison, ed., 1999; Beck, ed., 2007); memory and identity (Van Dyke and Alcock, eds., 2003); and historical archaeology (Small, ed., 1995). This body of work, however small, demonstrates at least the potential of cross-cultural perspectives and important sources of archaeological analogy, while grants from the National Science Foundation (Behavioral and Cultural Sciences), normally reviewed by American anthropologists, are now more routinely awarded for work in Greek archaeology. Finally, the archaeological sciences in Greece have become firmly established, reaching well beyond their traditional roots in prehistory (e.g., Voutsaki and Valamoti, eds., 2013; see Margaritis; Mylona; Lagia, this volume).

Although the widespread adoption of intensive archaeological survey in the 1970s and 1980s had made classical archaeologists increasingly self-aware, and indeed self-conscious of typical processual concerns of scale, sample, and methods, as well as the effects of the research design on results, in the realm of excavation, two parallel traditional practices continued to predominate. On the one hand, for excavators, there was still little need to explain what they were doing, or why; or even to justify their research design beyond the self-evident historical or material significance of the site itself. This is perhaps a carryover from the large-scale perennial excavations of certain sites, the “big digs,” whose geographic, historical, epigraphical, or art historical importance was already firmly established. For this reason alone, it was never seen as important to relate methods to results; simply the engagement with the site itself justified methods and the significance of the data. On the other hand, for the majority of classical archaeologists conducting synthetic studies of various categories of material and context, the broad theorizing encouraged by cross-disciplinary advances necessitated the use of diverse and plentiful datasets, but most often in these cases, the definition of the assemblages, conditions of the samples, or integrity of the contexts, were poorly documented or understood.

What we find mostly missing in both traditional areas of archaeological practice is close and critical focus on context, which is all but absent in recent handbooks and companions: the consciousness of the limitations of the sample; the implications of an expanding sample; the acknowledgement that methods of data recovery are shaped by the research design; and that all of these actively inform our construction of the archaeological record, and ultimately our ways of explaining historical conditions or cultural processes (see Lagia; Margaritis, this volume). If contemporary classical archaeology, beyond specialist subdiscourses about chronology, artifact style, and related matters, can be said to have been influenced by cognate fields of anthropology and prehistory, and indeed by archaeology at large, it is perhaps foremost in the self-consciousness of practice. That is to say, there is awareness that the practice of conducting archaeological excavation or survey is an active construction

of the archaeological context itself; it defines the material components of the assemblage and thus determines the results and ultimately the efficacy of the application of theory or the integration of data into historical or cultural reconstruction. The critical component of practice is the engagement with context in the field and at a number of scales and stages of fieldwork, in which we begin to discern material patterns of structure, behavior, and process, and form models for reconstructing systemic context. While classroom courses in method and theory in classical archaeology now mimic the standard course in anthropology departments, we still do not consider fieldwork or actual engagement with archaeological contexts critical components of graduate curricula in North American universities.

Greek Archaeology in Context

The papers in this volume address various issues that pertain to archaeological practice in notional Greek contexts in the Archaic, Classical, and Hellenistic Mediterranean (ca. 800–100 B.C). They not only take up basic fieldwork and middle-range problems, but demonstrate how sampling and documentation—the active construction of context and assemblage—are interpretive processes affecting the project’s overall research design and direction, and practical decisions made in the field. Consisting of individual case studies, the chapters explore how the recovery of new material and the application of various analytical tools were guided by evolving research questions; and how the reflexive examination of these research questions shaped the methods, the sample, and the characterization of context, and finally the conclusions on historical processes or cultural systems. The collection is meant to be eclectic, demonstrating a diversity of field-based problems and perspectives, rather than the efficacy of specific field methods or theory.

Thus, the chapters in this book deal more with practice than theory; more with methods than methodology; and more with the implications of new assemblages and contexts than with interpretative frameworks. Furthermore, there is no underlying thematic, geographical, or culture-period focus. This was intentional (and perhaps inevitable), and we hope that as a group the papers may function to express a diversity of approaches that ultimately contributes to new questions and research problems in the field, while individually serving as conceptual models for use in courses and seminars, and as analogues broadly applicable in developing future dissertation and research directions in a variety of contexts and culture-periods. We also hope that the book or a series might be developed further with future projects, along similar lines, but within more narrowly defined culture-periods, regions, or contextual parameters.

The papers encompass a broad chronological range, extending from the end of the Early Iron Age to the beginnings of the Roman period, and equally broad systemic contexts of urban, rural, civic, domestic, mortuary, and cult spaces. They are also

regionally diverse, taking in sites from Sicily to Rhodes, and from Macedonia to Anatolia. In general, the contributions tend to be both data- and context-oriented, and therefore are sometimes descriptive. Some relate the process of excavation to research design and current narratives, while others necessarily reflect on the influence of dominant or master narratives in shaping our approach to archaeological context. Finally, the authors themselves represent very different backgrounds and intellectual traditions, and therefore very different ways of understanding concepts and nomenclature of theory, method, and practice—encompassing classics, prehistory, anthropology, archaeology, and classical archaeology (as it is variously construed in Anglo-American and Greek universities and intellectual milieus), and specialized fields now playing a central role in archaeological projects in Greece: landscape archaeology, bioarchaeology, archaeobotany, and zooarchaeology.

The book is not meant as a history or critique of a past century of Greek archaeology—though some papers reflect on this—or simply to emphasize processual problems of interpretation of primary contexts. None of the case studies themselves claim to represent the state of the art of excavation or survey, and there is no methodological prescript. While there is a decided emphasis on fieldwork, the contributions demonstrate, by example, the implications of a contextual approach: more problem-oriented excavation, more data, and more considered reflection on how research design and methodological trends have affected decisions made in the field, the choices and application of methods (recovery, documentation, and analysis), and ultimately the rendering of archaeological context. In short, the contributions do not claim to present finished work or uniformly successful conclusions, but they do serve to bring into focus what we are doing as classical field archaeologists, while presenting possible future directions in the field.

Most of the papers present summaries and overviews of individual archaeological excavations and surveys, or focused analyses of sites, contexts, or assemblages such as houses, settlements, sanctuaries, cemeteries, civic spaces, or various components of these. Although all of the papers indirectly address the definition of classical archaeology, basic questions include: what is the potential of asking old questions of new data in Greek archaeology? What are the implications of reshaping old questions or forming new questions in a discourse derived from archaeological practice, and engagement with methods of recovery, analysis, and definitions of archaeological samples and contexts? Examining a variety of types of material and assemblages, the papers tend toward a ground-up consideration of the impact of site- and context-specific variables in guiding both reconstructions of systemic context and broader theoretical issues in the field.

A number of the chapters focus on or integrate components of mortuary contexts in their studies, emphasizing both the importance of this kind of evidence (and the bias of our samples and narratives) in current scholarship, as well as the great potential of looking at burials from different material, spatial, contextual, and scalar perspectives (Small; Alexandridou; Lagia; Stefanakis et al.; and Kyriakou and Tourtas).

David Small, for example, challenges the master narrative of the social and political behavior represented by various instances of Athenian sumptuary legislation known from written sources—a commonplace historical metanarrative affecting not only our understanding of the social history of Classical Athens, but the way we traditionally study the chronology and function of sculpture, pottery, and mortuary topography and architecture. Vividly demonstrating the contrast between contextual and historical interpretations of the burial record, Small's approach engages diachronic and experiential landscapes of cemeteries ("tombscapes"), in which the horizontal stratigraphy of accumulating burials, tombs, monuments, and residues of past activities has shaped the synchronic context, and informed subsequent burial practices and their imbedded social strategies and outcomes. Working with well-established historical perspective on Athenian restriction of ostentation, Small shows how the idea has been equated with a leveling, or middling, ideology that proceeds to the isonomia of classical democracy and citizenship, while curtailing the behavior of women. After reviewing both the written and archaeological data from Athens, he uses archaeological and ethnohistorical analogy to show that sumptuary legislation has existed in other culture-periods to mediate and control competition and instability among elites.

Other papers in the volume focus on the study the ancient Greek city (e.g., Whitley; Antonaccio; Donati; Haggis; Stefanakis et al.), which brings with it problems of scale and archaeological accessibility—and the deep and complex stratigraphy of the sites themselves—but in the cases of many historically-attested sites, also a deep history of fieldwork and century-old intellectual traditions that have affected subsequent research designs and future directions of excavation.

James Whitley's contribution considers the place of classical archaeology, which he describes as "a nexus for a number of distinct traditions of inquiry, which have retained much of their character from the middle of the nineteenth century until today." His example is the "classical" Cretan city of Praisos, using it to understand the work of national schools of archaeology over more than a century, as well as the ways in which ancient sources, modern interests and intellectual traditions, and issues of ancient (and modern) Cretan identity have left their imprint on the site and have informed a current generation of fieldwork. The paper weaves a compelling story of diverse strands of fieldwork and archaeological thought leading to the current Praisos Project. Questions of how one deals with a stratigraphically complex and multi-period site, the large spatial scale of diverse cultural contexts, and problems encountered in urban survey, are similar to those faced by Haggis at Azoria and Stefanakis and colleagues at Kymissala (this volume), and Whitley's response is an equally diverse series of field methods and methodological frameworks. His economical but detailed survey of a century of archaeological interests and work in eastern Crete shapes an historical narrative of archaeological thought and practice and diverse national research agendas, which have effectively shaped the archaeological record of Praisos, both materially and intellectually.

The effects of the early history of fieldwork at urban sites on our perception of archaeological landscapes and research directions, which Whitley summarizes at Praisos, is also at the core of Carla Antonaccio's paper, which discusses the legacy of an "accidental" big dig—six decades of fieldwork at Morgantina in Sicily. Without a continuous and well-funded institutional base, Morgantina has nevertheless continued to be a unique focus of American fieldwork in Sicily. She discusses how the site's large and impossible-to-duplicate legacy data, acquired without the kind of research design now considered routine, can be repurposed to address questions and form new hypotheses. Her contribution considers a particular instance from the Archaic phase of the site, a type of pottery considered distinctive to the indigenous non-Greek population, and what recent analysis and study reveal about its manufacture and distribution.

Tamar Hodos presents an archaeological study from what is usually considered the fringes of the classical world: ancient Lycia in southern Turkey. Hodos's work contextualizes Turkey's well-known monumental classical sites in a regional project over the *longue durée* of the fourth to mid-first millennium. Focused on the site of Çaltılar höyük, Hodos's interdisciplinary project expressly aims at a region, its connections, its identity, and its contribution to defining classical archaeology. Hodos deals with some of the same themes as does Whitley in the Cretan context, especially the national "schools" of archaeological investigation and thought, and current ideological and political issues that surround Turkish archaeology. She concludes that the "big dig" is not necessary to answer big questions, and suggests that "Classical Archaeology is not Classical in any classical sense," considering some of the same themes as Antonaccio, who also queries the identity and place of Morgantina in the classical archaeology of Greek Sicily.

Evi Margaritis's study of fourth and third century households in Macedonia demonstrates that by simply turning the emphasis of study from architectural plans and the spatial distribution of artifacts and features—the traditional hierarchy of current approaches to Greek domestic space (cf. Ault and Nevett, eds., 2005)—to a close contextual examination of botanical remains, one can substantially transform our understanding of the archaeology of the Greek house, and the interpretation of its economic and social functions on various analytical scales. Even though taphonomy and formation processes have long been a concern of classical archaeologists, leading them to reject simplistic or anachronistic labels for room functions in Greek houses (Allison 1999; Ault and Nevett, eds., 2005), the material and contextual bases for interpretation remain remarkably limited. Margaritis's paper introduces only one component of the missing data, the plant remains, but demonstrates that a shift in focus presents entirely new research questions on environment, procurement, redistribution, processing, preparation and consumption—on a regional scale, patterns that can reveal the essential economic and social functions of Greek households. These basic questions, applicable to a variety of classical contexts, are fundamental to any consideration of Greek domestic space. Margaritis argues for not only more intensive sampling

strategies and a broader scope of research designs, but also the coordinated integration of a wider range of contextual and historical evidence.

Anna Lagia, adopting an unabashedly historical approach, constructs a diachronic narrative of socioeconomic differentiation among populations in Athens from Classical to Roman periods, drawing principally on burial assemblages from Kerameikos and Kotzia Square cemeteries. The cemeteries represent socially-differentiated samples with parallel histories of use, allowing for a remarkably nuanced evaluation of cultural and chronological variability in health and life ways, set against the backdrop of long-term social, political, and economic changes in Athenian society. While she locates biological anthropology in the history of archaeological research in Greece, and delineates the role and potential of bioarchaeology in various discourses in classical archaeology, as in Margaritis's paper, she also demonstrates the efficacy and imperative of such work in fundamentally redirecting questions and discourses in social and economic history.

A different perspective on the mortuary archaeology of Athens is presented by Alexandra Alexandridou, who reconsiders funerary and extra-funerary ritual practices in the Archaic Kerameikos and Attic countryside, against a similar backdrop of long-term social history. As in Lagia's study of skeletal remains, Alexandridou must confront the difficulties of uneven datasets derived from a century of excavation, as well as a history of research on Greek pottery that has privileged painters, iconography, and chronology at the expense of use, performative display, and depositional contexts (e.g., discussion in Lynch 2011, 3; Saripanidi 2012). Her handling of ceramic assemblages, in the context of depositional behavior within Protoattic funerary trenches, presents the spatial and chronological dimensions of mortuary practices at a critical threshold of sociopolitical change in seventh century Athens: distinctive assemblages of forms, and patterns of chronology and deposition, indicate funerary functions (in the Kerameikos) and extra-funerary tomb cult (in Attica) as differential responses to social change.

Dimitra Mylona's contribution brings to the forefront the fundamental importance of zooarchaeology in sanctuary contexts, emphasizing that if archaeology is to inform our understanding of Greek cult behavior and ritual practice, it must target the recovery and study of the full range of plant and animal remains, and close consideration of taphonomy and formation processes in a variety of chronological and cultural contexts on the same site. An integrated environmental-cultural approach to the Kalaureia sanctuary traces not only patterns of procurement and processing of marine fauna, but also regional fishing practices and various localized depositional events and consumption processes in Archaic and Hellenistic-Roman periods. Ultimately we are required to reconsider the way that we have defined assemblages of food debris in sanctuary contexts.

In Mylona's paper, the contextual approach—the close examination of contexts of preparation and consumption of marine fauna—leads her to a reevaluation of objects related to fishing activities. In the analysis of the Early Roman phase of Building I

at Kalaureia, she suggests that fishing implements might have been curated or even manufactured for sale to votaries—indeed accounting for the widespread appearance of such objects across this sanctuary in a number of periods. The assertion expands our conceptual definition of “raw” and “converted” offerings, introducing the idea that Greek sanctuaries may have produced practical implements for use as votives—that is, not personal property (raw offerings) *per se*, but, in their production-deposition sequence, functioning in essence as converted offerings (cf. Whitley 2001, 312). That is, it is the context of the objects rather than their form (or formal definition) that determines function.

Another take on the Greek sanctuary is presented by Athanasia Kyriakou and Alexandros Tourtas, who examine pits recovered in the excavations in the sanctuary of Eukleia at Vergina (fourth century B.C. to first century A.D.). The excavators emphasize the fundamental problems in discerning primary structuring events among notional “secondary deposits,” focusing on patterns of deposits of similar configuration that suggest ritual events and ritualized activities. Even though dumps containing building materials, pottery, animal and plant remains, and fragments of votives are not uncommon in Greek sanctuaries, given their longevity and complexly layered history of use, the taphonomy of specific contexts, and the formation processes of dumps are rarely studied as indications of primary depositional practices. Shifting the focus of analysis from the things found in deposits to the systemic context of the creation of the deposits themselves, the authors explore dynamic cultural processes. Their work effectively changes our perspective on sanctuary dumps as mere indications of chronology and phasing (or corroboration of historical events), on the one hand, or as a source of cultic or votive objects for artifact study, on the other. The diacritical differentiation of dumping practices is extended to the mortuary context as well (Stenomakri Tomba), as a comparative analysis of the dynamic formation of funerary and ritual landscapes (cf. Small, this volume).

Jamieson Donati’s paper, taking us through various architectural, topographical, and depositional contexts of the urban centers of Argos, Elis and Megalopolis, also brings to the forefront the idea of archaeological contexts as results or residues of long-term cultural processes. In this case, he shifts the focus from the sanctuary to the city, and from specific excavated deposits to broader spatial patterns of agoras in the Peloponnese. To address questions about the structure of urban space is problematic in terms of both methods and interpretation, and our lack of the broad horizontal samples that we need to visualize cityscapes in synchronic detail is as frustrating as the compressed or disturbed stratigraphy resulting from the long-term of use of these spaces (e.g., Greco 2009). Countering commonplace perceptions of the Greek agora as a uniform construct and formal artifact in archaeological and historical records, developing unilaterally toward increasingly structured and formalized architectural space, Donati gives us a compelling diachronic narrative of place, showing very different trajectories of change as responses to cultural practices, local environments,

and historical conditions. There is much in Donati's work that resonates with Small's perspective on tombscapes.

The problems involved in understanding the development of the agora might be extended to Greek urban topography in general, given the size, scale, and diverse configurations of city centers and landscapes, and the narrowness of our archaeological samples. With Donati's work, we rely on the integration of uneven written sources, surface survey, remote sensing techniques, and documented excavation samples—each application, with their own limitations, is still at the core of current trends in ancient urbanism (cf. approaches in Osborne and Cunliffe 2005; Owen and Preston, eds., 2009; Creekmore and Fisher, eds., 2014). To address questions of field methods (conceptual and analytical scales and sampling strategies), and to implement excavation and survey techniques in urban environments, we still need to conform to extreme limitations presented by unique environmental conditions, site histories, and the accretion of depositional episodes and processes. The physical condition and occupational history of each site present unique, and in some cases, because of post-classical and recent development, insurmountable limitations for the excavator.

This problematic perspective on urban and suburban archaeology is presented by Manolis Stefanakis, Konstantinos Kalogeropoulos, Andreas Georgopoulos, and Chryssi Bourbou, who provide an overview of the research goals and descriptions of field methods for handling a large-scale settlement system on Rhodes—the broad occupational zone of the ancient *demos* of Kymissaleis (modern Kymissala) within the late Classical district of Kamiris. The paper brings to the forefront critical methodological issues of defining the research area, sampling universe, and a research plan, within a materially and spatially complex, dispersed, and multi-period site. The ambitious Kymissala project has initiated diverse field methods and data management protocols—archival work, topographical study, surface survey, remote sensing, excavation, and bioarchaeological analyses—as an initial stage of an overarching research design that aims to understand a complex micro-regional history of a diverse group of settlements, sanctuaries, and cemeteries, with core periods spanning Archaic through Late Roman. The job of working with such wide-ranging behavioral contexts, culture-periods, and analytical scales has required the design of broadly construed research goals and diverse field strategies. The paper demonstrates both the difficulties and potential of handling a complex urban environment, as well as the inherent problems of working with narrowly defined samples that characterize most excavations in Greece.

Similar problems are faced by Donald Haggis, who addresses problems of early Greek urbanization and urbanism in an excavation at the Early Iron Age and Archaic site of Azoria in eastern Crete. While Whitley's paper brings up the peculiar nature of post-Minoan archaeology on the island—neither conceptually “classical” nor “Minoan”—the problems are compounded for the Archaic period with its deeply-rooted and complexly developed historical discourse (and metanarrative) emphasizing a stratigraphic gap or discontinuity that evinces economic decline, and in some

accounts, an island-wide depopulation in the sixth century B.C. There is probably no area of classical archaeology that so emphatically articulates the distance between historical and archaeological ways of looking at archaeological evidence—for historians there should be historical causes for the apparent effect of the disappearance of Iron Age sites at the end of the seventh century on Crete; for archaeologists, it is because we have never bothered to recover, excavate, or study Archaic sites; or to consider discontinuous patterns as a normative mode of settlement development. Haggis recognizes a discontinuity in the seventh century, but correlates this to an island-wide process of sociopolitical and economic restructuring in the context of urbanization.

Shifting the focus from urban regions to a single site, the excavators of the Hellenistic settlement of Prophetes Elias (Arkalohori) offer a preliminary reconstruction of the structure and organization of households in third century B.C. central Crete. While their work is preliminary, Kalliope Galanaki, Christina Papadaki, and Kostis Christakis present a detailed picture of what might be now termed the Cretan “normal house” (cf. Truemper 2005 for Delos)—the so-called Cretan linear house with hearth room—a form of domestic architecture which can be linked with remarkable consistency to several contexts across the island (Westgate 2007), including examples derived from recent study of the site of Trypitos, and renewed excavations at Dreros. As the authors demonstrate, we may be at a threshold in studies of Hellenistic Crete to begin modeling the social and economic structure of both urban settlements, and second-order small towns, from the standpoint of domestic space. In the case of Prophetes Elias, there does not appear to be significant social or economic differences in the form or spatial organization of houses. The pithoi, however, found across the site, emphasize not only the fundamental importance of the household as an economic unit in an agrarian society—with normative capacities accommodating the needs of a single nuclear family—but differentiation in storage capacities, and the use of Archaic and archaizing jars, may suggest social distinctions between residences or settlements. Whitley (this volume) reports a similar reuse of Archaic pithoi at Praisos, and Haggis’s paper addresses their original use in Archaic domestic and civic contexts. These large and impressively decorated jars, long overlooked by classical archaeologists as simple utilitarian coarse wares, are brought to the forefront of the research design of the Prophetes Elias excavation, representing important indications of a social-symbolic discourse within the households and the broader community.

This book is meant to explore how new forms of material culture and types of sites; methods of data recovery and analysis; scientific and analytical techniques; and sampling strategies should be affecting the discourse in classical archaeology, and the broad range of research questions and strategies at our disposal. A critical question is how field practices have formed our assemblages and directed the ways that we approach Greek cultural landscapes, and determined the research questions that now affect how we sample sites, collect and study artifacts and ecofacts, and ultimately construct the archaeological context. The book’s contributions confront the implications of an integrated dialogue between realms of data and interpretive

methodologies, addressing how reengagement with the site, assemblage, or artifact, from the excavation context, may structure the way that we link archaeological and systemic contexts.

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James Whitley

2 Scholarly Traditions and Scientific Paradigms: Method and Reflexivity in the Study of Ancient Praisos

Abstract: Histories of archaeological thought and handbooks of archaeological theory generally try to fit developments into a tri-partite scheme: traditional (cultural historical), processual and postprocessual. These three stages have been understood as three distinct scientific paradigms, in Kuhn's sense. Though this scheme was first devised for areas of archaeology (American anthropological archaeology, British prehistory) other than classical, it remains the only scheme around, and one that has been applied (intermittently) to our understanding of developments in classical archaeology (e.g. Shanks 1995). This paper looks at how this understanding of archaeological development applies to the study of one particular "classical" site, Praisos in eastern Crete. In particular it examines whether the notion of "reflexivity" (Hodder 1997), hitherto held to be a scholarly virtue unique to the postprocessual stage of intellectual development, has any real meaning in distinguishing between competing paradigms. Praisos is a site which, almost intrinsically, invites reflection on various forms of identity both in ancient and in modern times. It is the city of the "Eteocretans" (Hom. *Od.* 19. 175–7; Strabo 10.4.6), the "True Cretans," whose distinctive ethnic identity was first noted by Herodotus (7.170–1), the intellectual (if not the historical) progenitors of the Minoans. This paper argues that various forms of reflexivity have been in evidence on the part of the earliest systematic investigators of this site. These forms of reflexivity have however been refracted through three scholarly traditions (Italian, British and Greek) which have distinct institutional affiliations. It also investigates how we should understand the differences between the methods and approach of earlier investigators (Bosanquet for the British, Halbherr for the Italians) as compared to those used in more recent excavations and survey. Does it make sense to explain these differences in terms of paradigm shifts? The paper argues that greater attention must be paid to intellectual traditions, which persist despite paradigm shifts, if we are to have a viable history of classical archaeology, and a truly "reflexive" understanding of current practice.

Introduction: What is Classical Archaeology?

This looks like a simple question with a simple answer. Classical archaeology is the archaeology of the Greek and Roman world (as in Alcock and Osborne 2012, 2–10). When we come to the Greek world however, this apparently simple answer dissolves under close scrutiny. In terms of strict logic, there are at least four possible answers, which give the discipline (or sub-discipline) of classical archaeology varying degrees of distinctiveness (see Snodgrass 2012, 13–14). And even if we prefer the answer "classical archaeology of Greece is the study of the material remains of Greek antiquity," this is the very answer that begs the most questions. First, why "classical?" What is it about the Greeks that is "classical?" Is it their cultural legacy, their art, or both? And when and where do the Greek and Roman worlds begin and end? What about other peoples of the ancient Mediterranean—Lycians, Lydians, Phrygians, Eteocypriots,

Lemniots, Etruscans, Sicels, Sicans, Umbrians, Oscans, Lucanians, Apulians (Messapians), the Veneti, the Phoenicians (and Carthaginians) and the Eteocretans? And is classical archaeology a sub-discipline (a “handmaiden”) of classics, or part of a wider archaeological (and historical and anthropological) enterprise?

It is perhaps for these reasons that classical archaeology sits rather uncomfortably in any general account of what archaeology is, has been or should be. In histories of archaeological thought (e.g. Trigger 1989; 2006), classical archaeology enters the discussion with Winckelmann and the Olympia excavations, after which it drops from view; in primers of archaeological theory classical archaeology’s distinctiveness is acknowledged (e.g. Johnson 2010, 43), but mentioned as a rather embarrassing hangover from earlier (and outdated) forms of humanism. For many of its practitioners, classical archaeology remains a branch of classics or art history—its place within archaeology is not a question worth asking. All these factors result in the grittiness of classical archaeology (Alcock and Osborne 2012, 503)—its inability to fit into wider narratives of how archaeology as a whole progresses.

Other archaeologies—notably American anthropological archaeology and British prehistoric archaeology—do not appear to have such difficulties. Both can, with some modifications, be made to fit into a three- or four-stage scheme of archaeological development. This runs as follows. First archaeology emerged from antiquarianism, the crucial insight being the antiquity of humankind and widespread acceptance of evolution as both a natural and a cultural force. Then, a kind of cultural historical archaeology emerged, which attempted to make sense of the particulars of human material cultures in various times and places. In European prehistory, the major figure in this “cultural historical” stage remains Gordon Childe; in the archaeology of North America, an equivalent figure might be that great scholar of the Ohio and Illinois Hopewell, James B. Griffin. Then, partly due to parallel intellectual developments at the University of Michigan (Lewis Binford) and the University of Cambridge (David Clarke), a more scientific approach to the development of human culture over long time scales emerge. This is the so-called “New Archaeology,” whose most celebrated exponent in an Aegean setting remains Colin Renfrew. In the Aegean, a concern with cultural evolution over the *longue durée* led directly to the earliest systematic surveys, such as those on Melos (Renfrew and Wagstaff 1982). From about 1982 onwards, this style of archaeology was critiqued, mildly by some (e.g. Hodder 1986), aggressively by others (e.g. Shanks and Tilley 1987). Another form of archaeology was proposed, one more comfortable in the space between the humanities and the social sciences than with “science” (at least science in a strict, positivist sense). This was postprocessualism, and in the field of British prehistory it has prevailed. In North America, similar critiques of evolutionary processualism have now emerged (e.g. Yoffee 2005).

Such is the standard account that informs most archaeological primers (e.g. Johnson 2010). These stages of development have been presented as changes in *paradigm*, in Kuhn’s (1962) sense. Each stage is guided by a number of underlying and

distinctive methods and assumptions, which are more or less incommensurable with earlier or succeeding stages. In this, Kuhn's account of scientific "paradigm shifts" resembles Foucault's (1970) account of changes in the underlying *episteme* which informed (respectively) eighteenth and nineteenth century practice in the human sciences: each stage deals with fundamentally different concepts and entities; there is nothing of practical use that a modern scientist/researcher can learn from earlier practice. Phlogiston is simply a redundant concept, of interest to historians of science but not to scientists.

Herein perhaps lies a clue to classical archaeology's distinctiveness. Natural scientists may have rejected phlogiston, and few if any chemists would now read Lavoisier except out of historical curiosity. But many classical archaeologists still read Beazley, Furtwängler and even Winckelmann with profit—it does not seem that the concepts and entities they were talking about are entirely alien to the concepts and entities we wish to talk about. This is perhaps one reason why attempts to shoehorn classical archaeology into the three- or four-stage scheme (e.g. Shanks 1995, 119–182) often strike many as implausibly programmatic. This is not to say that the interests of all classical archaeologists remain exactly the same as they have always been. A plausible case has been made that classical archaeology has undergone a paradigm shift since 1980 or so (Snodgrass 2002; 2006, 78–104). Many readers of this volume would, for example, be interested in such things as gender, ethnicity, material culture, agency, commensality, pre-state social formations and so forth, ideas and interests which have come to classical archaeology sometimes directly from anthropology (e.g. agency; Gell 1998), but sometimes via processual and postprocessual archaeologies.

In this article, however, I want to suspend belief in a "paradigm shift." I want to explore the potential of another approach: classical archaeology as a nexus for a number of distinct traditions of inquiry, which have retained much of their character from the middle of the nineteenth century until today. I do so for several reasons. First, intellectual traditions have, so far, been little explored in the history of archaeological thought. Though much good work has been done on the dominant tradition in classical archaeology, that is, the German (Marchand 1996), we do not have equivalent understandings of the French, British, Italian, American or Greek traditions. Though the non-Greek traditions were all "imperialist" rather than "colonialist," in Trigger's (1984; *pace* Hamilakis 2007) sense, they each had their distinct character. The Greek, while always to a degree nationalist, was partially shaped by these foreign traditions. Second, an understanding of the intellectual traditions within which one works has to be a major aspect of that "reflexivity" which postprocessual prehistorians claim is their unique possession (Hodder 1997). Postprocessual prehistory is, however, much less reflexive than it claims—a presentation on Çatalhöyük at the European Archaeological Association conference in Thessaloniki in 2002, for example, notably failed to reflect on the character of its audience, many of whom were the descendants (Karamanlides) of the Orthodox Christians expelled from the Konya plain in 1922 (Mazower 2004, 356–370; Astrinidou 2010). "Reflexivity"—the need to reflect on one's practice—

remains a worthwhile ideal, especially (as in the case of Praisos) when the local community takes an enormous interest in what you are doing.

Praisos is a very good place to explore the interaction of various intellectual traditions. It has been explored by Italian, French, Greek, Polish and British scholars, some of great distinction. It lies between two other major zones of study in East Crete, whose exploration exemplifies the character of the French/Belgian tradition on the one hand (Itanos) and the American on the other (Kavousi/Azoria, see Haggis, this volume). And the ancient traditions which relate to this particular site have, it could be argued, determined the research priorities of Cretan archaeology since 1902 (Whitley 2006b). Let us begin with these traditions.

Praisos: The Ancient Traditions and Early Exploration

Praisos, in eastern Crete (see fig. 2.1), is a site that, almost intrinsically, invites reflection on the relationship between identity and politics. Though the site itself is not mentioned, the “Eteocretans” (Hom. *Od.* 19.175–7) are one of the five peoples of Crete mentioned by Odysseus in his mendacious attempt to pass himself off as a Cretan. Herodotus (7.170–1) is the first to mention the “Praisioi,” and relates how the people of Praisos regarded themselves as a remnant of the original inhabitants of Crete, being (with the Polichnitai) the only subjects of King Minos who did not accompany him on his disastrous expedition to Sicily. Strabo (10.4.6), whose account may be entirely based on Ephoros, combines these two traditions: the Eteocretans (literally “True Cretans”) are identified with the Praisioi, the people of Praisos. Strabo also notes that Praisos is where the temple of Dictaeon Zeus is to be found, and locates the site by reference to others in Crete.

Strabo’s equation between the Praisioi and the Eteocretans seems to have been accepted by most of his contemporaries writing around the time of Augustus (such as Diodoros). But by this time the site was a ruin, having been destroyed by its neighbor Hierapytna in the years before 140 B.C. Nonetheless, the “Eteocretans” continued as minor players in the ethnographic accounts of the ancient world for another century or so, their curious customs being mentioned in Athenaeus (*Deipnosophistae* 9. 375f–376a = *FrGrHist* 472 fr.1). There were, by this time, no Eteocretans around to dispute this account.

During the Middle Ages, the only memory of ancient Crete seems to have been the labyrinth at Knossos. In the sixteenth century, Venetian antiquaries such as Coronelli (Pashley 1837, 290, n. 17 and Bosanquet 1902a, 231, n. 1) recorded a small village called “Prassous” on the site of what we now know as the first Acropolis of Praisos. This antiquarian research was brought to an end by the Ottoman conquest of 1649, during which time the Christian village of Prassous shrunk, and the Muslim village to the South (Vavelloi) grew. Antiquarian research was also hampered by Strabo’s

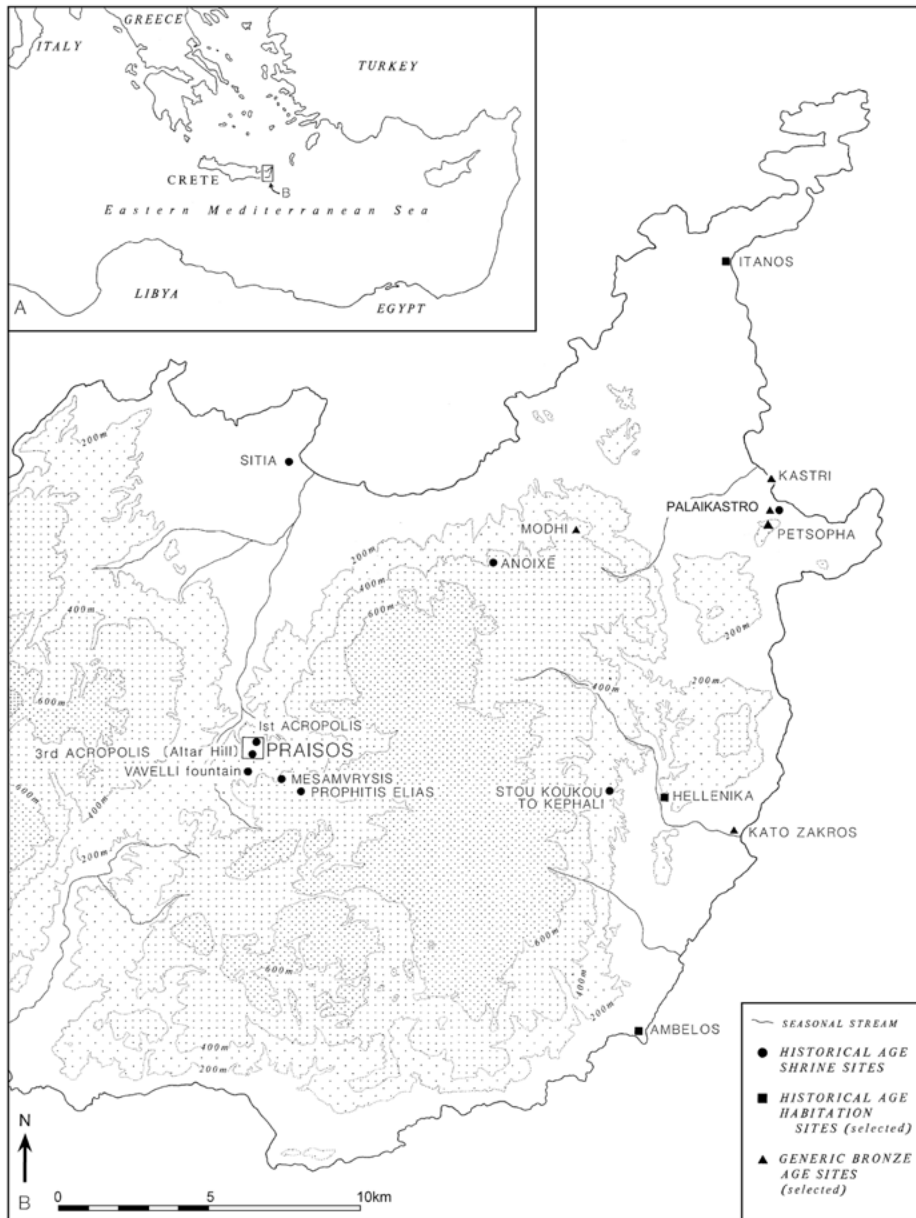


Figure 2.1: Map of Eastern Crete showing location of Praisos and other sites in Eastern Crete (drawing H. Mason; Praisos Archaeological Project).

confusing account of the site's location. Was Praisos the same as Priansos, a site in south-central Crete?

Antiquarian research then lapsed. It was revived not by the Italians but by the British. The British had a political interest in determining just how oppressive Ottoman rule was (as the Ottoman Empire, more often than not, was Britain's ally between the Napoleonic and Crimean wars). Robert Pashley toured the island in the aftermath of a failed Cretan revolt in support of Greek independence. His account of the island is a classic of the "traveler" genre. It mixes observations on antiquities with detailed accounts of geography, the local inhabitants (Christian and Muslim), folklore, and poetry. Pashley (Pashley 1837, 288–293) was also the first to look in detail at inscriptions; one preserved to this day at Moni Toplou near Palaikastro is an account of an arbitration of a boundary between Itanos and Hierapytna (*IC* III.4. 9). It locates both Praisos and the temple of Dictaeon Zeus firmly in eastern Crete, between Itanos and Hierapytna, and provides a date for the site's destruction (before 140 B.C.). Pashley's account (Pashley 1837, 288–293), which was never completed for the Eastern part of the island, was followed by that of Spratt (1865, 163–169), who visited the island in the aftermath of the Crimean War. Spratt's is another classic of the traveler genre. It fills in Pashley's gaps by visiting the site and suggesting various possibilities for the site of the sanctuary of Dictaeon Zeus.

None of these antiquarian researchers engaged in excavation, which the Ottoman authorities did not encourage, and the Christian inhabitants of Crete did not support. In the 1870s there was another Cretan revolt, firmly suppressed by the Ottomans. Between 1869 and 1881 the Ottomans had established their own imperial museum in Constantinople/Istanbul, to which all finds within the empire were sent. For the majority, Greek-speaking Christian inhabitants of Crete, their Cretan patrimony could not be located in Istanbul; this would be an admission of their subject status, and a denial of their aspiration to join with Greece. Before excavation could begin the political situation would have to change. But before it did, there were other visitors to Praisos.

The Italian Tradition

The Italians were latecomers to the game of imperialist classical archaeology. Unlike the French, Germans, Americans and British they had not established a foreign school in Athens by 1890, and had not staked their claim on any major classical city or sanctuary on the Greek mainland. Crete, however, remained relatively unexplored in the 1880s, and the island provided the perfect place for Italians to demonstrate that they had fully mastered the German art of classical *Altertumswissenschaft*. Born within the Austrian empire and educated at Vienna, Federico Halbherr (1857–1930), had already discovered the first fragments of the Gortyn Law Code in 1884. In the



-- ν καλμτα ·
 ος | βαρζε | α[·]·ο --
 -- αρκ[·]·κ·σετ | με ·
 αρκρηκλσε | ε · --
 5 -- ασεγ·νκν(α)τ



Figure 2.2: “Eteocretan” inscription
 (circa 500 B.C.) discovered by Halbherr
 (barxe inscription) (after Guarducci, *ICr* III.6.1).

same year he visited Praisos. Here he found and published a number of inscriptions (Halbherr 1894, 540), all in Greek letters, but one of which (*IC* III.6.1) was not written in the Greek language (fig. 2.2). This inscription was almost immediately interpreted as “Eteocretan” (Comparetti 1888, 673), thus confirming the essential truth of the ancient traditions about the site. They also excited considerable interest amongst scholars of other nationalities (see below).

These discoveries did not result from excavation. By the 1890s, however, the Ottoman authorities were more accommodating to Western interests. With backing from the Archaeological Institute of America, Halbherr returned to Praisos in 1894 where he conducted extensive excavations (Halbherr 1901; Savignoni 1901): on the First Acropolis (his Acropolis A); on the third Acropolis or Altar Hill (his Acropolis C); and at a spring site just below the Muslim village of Vavelloi (“the spring at Vavelloi”; site no. 68 in fig. 2.3). The considerable finds he uncovered dated from the end of the Geometric period until Hellenistic times. They included numerous votive terracottas, many of which came into the possession of the Metropolitan Museum of Art in New

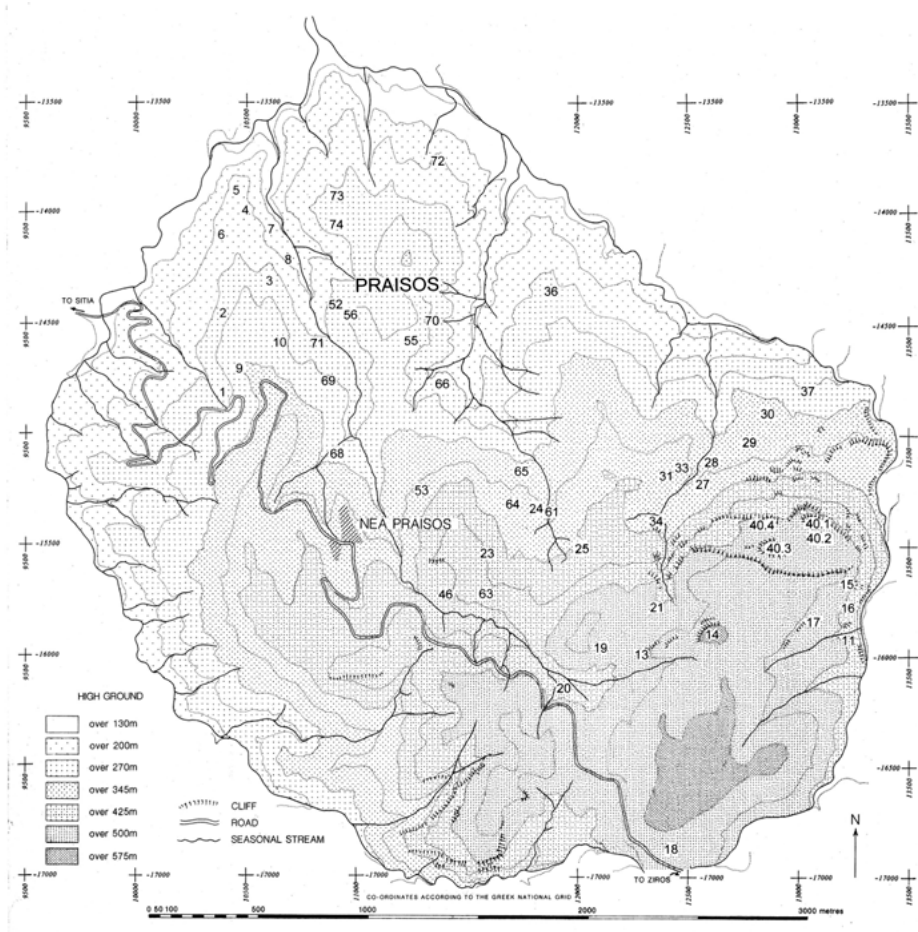


Figure 2.3: Map of the Praisos survey area, with locations of sites referred to in text (drawing H. Mason; Praisos Archaeological Project).

York, and more inscriptions. But there was nothing of Bronze Age date, and therefore nothing to confirm the hypothesis that Praisos had been a major centre in that period that subsequently became a place of refuge for the other, pre-Hellenic inhabitants of the island.

The Cretan uprising of 1896, which eventually led to Crete becoming a protectorate of the Great Powers and leaving the Ottoman Empire, put a stop to excavation (see Carabott 2006). Many of the sites that Halbherr had excavated were looted (though some of the loot was collected by the bishop of Ierapetra). This may be one reason why Halbherr did not continue here. But his subsequent, much more successful endeavors at Phaistos and Hagia Triada suggest another reason: he was much more interested in the Cretan Bronze Age.

Halbherr's departure did not end Italian interest in Praisos. After Halbherr's death, his pupil, Margarita Guarducci (1902–1999), undertook a comprehensive publication of all the inscriptions that Halbherr had collected on Crete (and any others she could get permission to publish; see D'Agata 2009). The title of this great work (in four volumes) *Inscriptiones Creticae opera et consilio Friderici Halbherr collectae* shows the great regard in which she held her mentor. In 1942 she published the volume on eastern Crete, with an extensive chapter on Praisos (Guarducci 1942, 134–155 = *IC* III.6.1–34).

It is instructive to compare *Inscriptiones Creticae* with its ultimately German (and Berlin-based) model *Inscriptiones Graecae* (*IG*). The texts accompanying both are written in Latin. *IG* is, like many of the tools we use in classical archaeology, highly Athenocentric; it begins in Athens, and is organized by type of inscription (legal, funerary, honorific etc.), as defined by historians. Though it gives due regard to both *Standort* (original context) and *Fundort* (where the inscription was found), as the twentieth century progressed, *Inscriptiones Graecae* gradually shed its interest in the physical and material character of inscriptions. Inscriptions became texts to be edited and interpreted, not objects whose nature was as much archaeological as textual. Guarducci, however, retained a great interest in the physical form, the appearance, the *materiality* and in some cases the *monumentality* of inscriptions (see again fig. 2.2). Her chapters on individual sites such as Praisos are informed by autopsy and her own topographical research. Each chapter begins with the ancient sources, moves on to numismatics (which of course often involves epigraphy), and then to the inscriptions themselves. She paid close attention to the context of particular finds—indeed her attention to both context and physical form make her (arguably) an exemplary “contextual” archaeologist.

All this also means that *Inscriptiones Creticae* is much more useful to *archaeologists* than *Inscriptiones Graecae*, if also (curiously) more old fashioned. Or, to put it another way, in not following a kind of “paradigm shift” within classical studies (from inscribed object in the nineteenth century to text in the twentieth), Guarducci was anticipating some of the more promising developments in early twenty-first century archaeology.

The British Tradition

Of the many foreign scholars who visited Praisos during the 1890s, it was an Englishman with a Welsh surname who kept coming back. Arthur Evans visited the site in 1894, 1896, 1898 and 1899, and picked up a number of distinctive finds. Of particular interest to him were the sealstones, some of which were inscribed in a script not yet understood (see Evans 1894; 1909, 150), which Evans tried to relate to Halbherr's “Eteocretan” find. Evans was not the only British scholar to show a particular interest

in the “Eteocretan country” at this time. Between 1899 and 1910 D.G. Hogarth, R.C. Bosanquet, R.M. Dawkins, J.P. Droop, J.H. Marshall, E.H. Marshall, E.S. Forster and J.L. Myres investigated Palaikastro (Roussolakkos, Petsofas, and Kastri), the Neolithic site at Magasa (Dawkins 1905), Kato Zakro, the Zakro gorge, Petras (recently re-investigated by Metaxia Tsipopoulou) and the site and environs of Praisos (see fig. 2.1). What drew them to this part of the world?

Like their Italian counterparts, British scholars were influenced by the ancient traditions, the idea that this part of the world was the home of the “True Cretans.” But there was also a peculiarly British dimension to their understanding of ancient ethnicities. French, German, Greek or American readers of this article will not really understand this if they are in the habit of treating “English” and “British” as synonyms. Englishmen with Welsh surnames (such as Evans) or those whose families were rooted in the Welsh Marches or the border county of Northumberland (such as R.C. Bosanquet) came to East Crete with a particular understanding of the complexities of British identity. Coming from an antiquarian tradition, they would know that the central fact of Medieval British history was the gradual displacement of the autochthonous Celtic-speaking peoples by Anglo-Saxon (i.e., German) immigrants from what is now England and their continuing survival in the mountainous western region of Wales. The Welsh then are the “Eteo-Britons” (True Britons). Hence Bosanquet’s bold declaration that “The Sitia peninsula is a Cretan Wales, and like Wales it has its Pembrokeshire” (Bosanquet 1940, 64). The “Pembrokeshire” in question is the Itanos peninsula: just as south Pembrokeshire was settled by English and Flemish immigrants in the twelfth and thirteenth centuries A.D. (creating a sharp North/South linguistic divide between English-speakers and Welsh-speakers that survives to this day), so the Itanos peninsula was settled by Greek immigrants at some point during the Late Bronze Age and Early Iron Age (or so Bosanquet believed). Interestingly, British scholars have tended to let the French explore this “Cretan Pembrokeshire.”

There are two other distinctive features of this British tradition. First, while all these scholars were archaeologists, they were not really professionals. By this I do not mean that they were bad either as excavators or as scholars. Rather their interests were more generally and omnivorously antiquarian and anthropological (informed by a spirit of what I have called “ethnological antiquarianism;” see Whitley 2003; forthcoming). Dawkins combined his excavations at Palaikastro with trips to Karpachos (Dawkins 1903; 1904) to make observations on the local dialect and customs. J.L. Myres, the excavator of Petsofas (Myres 1903) with wide archaeological interests in both Crete and Cyprus, is better known as an ancient historian than an archaeologist—he has been described by Andrew Sherratt as the “most broadly read Oxford Classicist of this (or any other) generation” (Sherratt 2006, 108). Evans himself had cut his archaeological teeth on the Aylesford-Swarling culture of Iron Age Britain (Evans 1890), had been a journalist in the Balkans, spent time in Scandinavian caves trying (in the best phenomenological fashion) to gain insights into Saami rituals (Bradley 2000, 3–5 and 18–19), and made a major contribution to the numismatics of

Greek Sicily before he committed himself wholeheartedly to the exploration of Bronze Age Crete. In this sense, British scholars were working within the same intellectual tradition of “ethnological antiquarianism” as Pashley and Spratt. Like Pashley and Spratt, scholars such as Bosanquet made observations on the local inhabitants and customs. Most of Bosanquet’s dealings with landholders in Praisos (Vavellou) and Petras were with Muslims. Bosanquet, however, was well aware (e.g. 1902c, 282) that these “Turks” mainly spoke Greek and had Greek names (if Ottoman titles).

A second major feature of the British tradition, one that made it distinct from the Italian, lay in the British attitude towards German *Altertumswissenschaft*. The Italians were keen to show that they had mastered the rules of German philological and archaeological scholarship, and to beat the Germans at their own game. The British attitude was more complex and contradictory. The British had so far resisted professionalization. None of the British scholars who explored East Crete were experts on ancient art, and only one object from the British excavations, the “Praisos plate” (Hopkinson 1904), was to figure at all in general discussions of Greek art. British scholars were reluctant to cut off classical antiquity from earlier and later periods (Whitley, forthcoming). But they were also (perhaps for this reason) only too eager to find fault with German or Austrian philologists wherever or whenever they could (as in Bosanquet 1940, 61).

All these features are apparent in British explorations of Praisos between 1901 and 1904. British excavations were much more extensive than Halbherr’s. As well as exploring the First Acropolis (Halbherr’s Acropolis A) and the Altar Hill (Third Acropolis or Altar Hill), tombs ranging in date from the Late Bronze Age (LMIIIA) to the Hellenistic were investigated. A more extensive exploration of the city’s sanctuaries, both within and outside the bounds of the ancient city, was undertaken, and the “megalithic house” at Hagios Konstantinos (site 24 in fig. 2.3) excavated by J.H. Marshall (Bosanquet 1902a, 236–240). These excavations resulted in a whole raft of publications, most of a preliminary character. A general account of the investigation of the Skalais cave, and of excavations on the Altar Hill, the First Acropolis, the Megalithic House and the tholos tombs (Bosanquet 1902a) was accompanied by more specialized publications on the (largely Geometric) pottery (Droop 1906), the tombs (F.H. Marshall 1906), the terracottas (Forster 1902; 1905) and the inscriptions (Bosanquet 1910; Conway 1902; 1904). Since several of these inscriptions (both those found by Bosanquet and by Halbherr) seemed to be “Eteocretan,” they called for both epigraphic and linguistic analysis. Wales (with Germany) is the home of Indo-European comparative philology, and it fell to the Cambridge-educated and Cardiff-based Welshman, R.S. Conway (who was later to undertake similar studies on the Umbrian inscriptions of Gubbio) to make the first serious attempt to decipher the language of the inscriptions. He decided (Conway 1902, 141–143; 1904, 120) that they were probably in an Indo-European language rather than a Semitic one (see Duhoux 1982).

The British excavations of 1901 were the most extensive to have taken place on the site and its environs. Finds of a greater range of dates were recovered than in any

other project. Despite this, major excavations were confined to one season. Bosanquet did return to the Third Acropolis in 1904, but only to recover more inscriptions. One reason for this is that Bosanquet had already taken an interest in Palaikastro (Bosanquet 1902b) by the end of that year, where he was eventually to find what he was looking for on the Altar Hill of Praisos: the site of the Temple of Dictaeon Zeus (Bosanquet 1905). But there were other reasons for this rush to the coast and to the Bronze Age. Though Praisos had been explored, it had failed to provide evidence for continuity of occupation between the Bronze Age and the Iron Age, and therefore absolute proof of continuity of culture. Most of the finds from the main area of settlement, the First Acropolis, seemed to be of Classical and Hellenistic date, and this led to the idea that the city itself was founded very late, and had simply served as a kind of cult center before that time. In another sense, the Eteocretans had served their purpose, as midwives to the Minoans, a lost race of exclusively Bronze Age date whose exploration was to determine how Cretan archaeology was to develop over the next century (Whitley 2006b).

Notions of race imply racism, and, in a scientific sense, there was quite a lot of racism in the British exploration of eastern Crete. Racism was combined with a more generally cultural-historical approach, in which racial (biological) differences between human groups were held to account for cultural differences (and thus differences in material culture). So when Hogarth explored the Bronze Age and Geometric (and so Eteocretan) cave burials of the Zakro gorge, he collected the skulls (but not the rest of the skeletons), and gave them to Boyd Dawkins for craniometric analysis. It was concluded that the skulls showed dolichocephalic rather than brachycephalic traits, indicating racial differences with later Hellenes (Boyd Dawkins 1901; Hogarth 1901, 142–145). A more elaborate piece of cultural-historical sophistry is provided by Droop (1906), who tried to account for the “Dorian” Geometric designs on pottery from Eteocretan eastern Crete. But to call British scholars cultural historians, and to fit them in to a grand design of historical development approved for other archaeologies, is not to take account of the breadth of their interests, or the long-term effects of their ideas.

For, linked to this general commitment to a cultural-historical paradigm, and in a sense forming an integral part of it, was a more general, melancholic contemplation of the rise and fall of civilizations, the idea that every civilization enjoys its day in the sun, and then (inevitably and inexorably) declines. This grander vision is of course present in *The Palace of Minos*. But it is also apparent in the work of two other students of the British School at Athens who worked in this part of the world in the years after 1900. J.H. Marshall who helped Bosanquet excavate the Megalithic Structure at Hagios Konstantinos (Gill 2000; Bosanquet 1902a, 231) went on to become Director General of the Antiquities Service of India, excavating at the major Buddhist cities of Sarnath and Taxila, and was instrumental in uncovering the remains of the Harappan civilization. Another visitor to eastern Crete at this time was Arnold Toynbee, who, while travelling on foot through the modern village of Chandras on his way to

Zakro, came upon an abandoned Venetian village with its ruined villa. He was struck by the thought that a contemporary Jacobean house in Britain would be full of life, whereas this structure was as much a ruin as Minoan Zakro, and this thought led him on to his great comparative study of civilizations (Toynbee 1972, 495). This vision is, of course, imperialist, in Trigger's (1984) sense—confidently, if also complacently so in comparison to those latecomers, the Italians. But this fact does not render it either worthless or redundant.

Even though Praisos was abandoned by British scholars in 1902, it was never quite forgotten. Sylvia Benton and R.W. Hutchinson returned to examine and publish some finds from the Altar Hill (Hutchinson et al. 1940). R.C. Bosanquet went on, first to Sparta, and then to excavate Roman military sites in Britain, such as Caerleon (in Wales) and Housteads (on Hadrian's Wall, near the Scottish border). But he never forgot Praisos, and was (at the time of his death) preparing a draft for the final publication of the site (Bosanquet 1940). But, while not quite forgotten, the site did not become the focus of any major excavation. When the British re-visited East Crete, they went to Palaikastro.

A Phenomenological Interlude: The French and the Poles

Joseph Demargne, for the French School, had visited Praisos in the 1890s, where he had picked up some terracotta plaques that are now in the Louvre (J. Demargne 1898; 1902, 571–580). Though the French did not explore the site further, the “Eteocretans” remained an important component in his son Paul Demargne's major synthesis of Archaic Crete, *La Crète Dédalique* (P. Demargne 1947). Interest in the Eteocretans was also maintained by the discovery, by French scholars, of other non-Greek inscriptions at Dreros, further to the West of Praisos (Van Effenterre 1946; cf. Duhoux 1982). None of this, however, materially affected how Praisos was understood.

This was to change from the late 1950s onwards through the intervention of Paul Faure (1960; 1969; 1972). Faure's interest was not in the site itself, but in the use of caves, and the location of sanctuaries. He noted the extraordinary concentration of “spring shrines” in the territory of Praisos, and (with the help of locals, including Manolis Figetakis) explored many of the caves in the area. (The changing role of caves on Crete, whether as refuge, sanctuary or sepulcher, was one of his principal interests). Faure's topographical and speleological interests could be described as “phenomenological” (*sensu* Tilley 1994), in that he was interested in the human dimensions of landscape, and why certain locales acquire a particular, often sacred significance. In this, he was part of a French tradition of studying “la terre,” later manifested in the work of François de Polignac (1984). Faure's speleological interests were partly shared by the Polish scholar, Bogdan Rutkowski, who in 1985 re-explored

the Skalais cave (Papadakis and Rutkowski 1985). But the Poles also had a particular interest in remote locations in Crete. From the 1980s onwards, Rutkowski's junior colleague, Krzysztof Nowicki, began his exploration of all the Late Bronze/Early Iron Age "refuge" settlements on Crete (Nowicki 2000). Several of these, notably the extensive settlement of Kipia above Kalamafki, are located near Praisos. Nowicki's plans provide a vivid sense of what life was like in these upland settlements, and in this sense too could be seen as phenomenological.

The Greek Tradition

The first Greek scholar to look seriously at finds from Praisos was the numismatist J.N. Svoronos (1890), who compiled a complete catalogue of all the ancient coins from the island, arranged by individual cities; in this his structure anticipates Guarducci's. His motivation was scholarly, but, writing in French for an international and largely Western audience, his purpose must be seen in part as political: to establish the Greek character of the island in ancient times. His work (which has not yet been replaced) did exactly that, even if it could not anticipate the curious effects of the invention of the "Minoans."

There was little or no Greek work on Praisos during the Cretan protectorate. Only when Crete had firmly become a part of the Greek state did the Greek Archaeological Service show any interest in the site. The first Greek excavations were those in the 1930s of Mavroeidis, who discovered the "tomb of the athlete" (Mavroeidis 1937). These were rescue excavations, necessitated by the activities of *archaiokapeloι* (tomb-robbers) in the area. Indeed, the need to forestall the *archaiokapeloι* was a major determinant of Greek archaeological policy in East Crete. One notorious *archaiokapelos* of the 1950s was a local from the Praisos area, the very Manolis Figetakis mentioned above. His activities prompted renewed interest on the part of the Greek Archaeological Service, which began to publish the results of their work in a specifically Cretan journal, *Kretika Chronika*. From the early 1950s onwards, Nicolas Platon (who was later to find and excavate the palace at Zakro) systematically recorded any chance finds in these *Chronika* (e.g. LM III to Geometric graves; Platon 1960, 301–320, Platon 1952, 485; other chance finds (Platon 1953, 516; Platon and Davaras 1960, 526–527), from Kipia above Kalamafki (site 40 in fig. 2.3; Platon 1954b, 481). He also revisited the "Megalithic House" at Hagios Konstantinos (site 24 in fig. 2.3; Platon 1960, 302), a Late Bronze Age "warrior grave" at Photoula (site 53 in fig. 2.3; Platon and Davaras 1960, 514–515; Platon 1960, 303–305) and the Minoan Villa at Hagios Georgios, Tourtouli (just outside what was to be our survey area and also, confusingly, referred to as Prophetes Elias Praissou; see Platon 1960, 294–300; Platon and Davaras 1960, 513–514). Platon's focus was on the Bronze Age, that is, the "Minoans," and, apart from Davaras' (1982) brief re-investigation of the Altar Hill, this remained the focus

of Greek interest in the area until the late 1980s, when Nikos Papadakis began his research into Hellenistic eastern Crete and Metaxia Tsipopoulou began her synthesis of Early Iron Age (Geometric) finds in the area (Tsipopoulou 1992; 2005).

Hamilakis (2007) has called the Greek Archaeological Service a “secular priesthood” in the service of the Greek Nation. And it is true that members of the Greek Archaeological Service take very seriously indeed their mission as a corporate body charged with both investigating and curating the archaeological heritage of ancient Greece. In this sense, the Greek Archaeological Service is “nationalist” in Trigger’s (1984) scheme. But this categorization is also reductive. The Greek Archaeological Service is not a unity—it has, for one thing, been traditionally divided into “Prehistoric and Classical” and “Byzantine” sections, and even within the “Prehistoric and Classical” there is a split between prehistory and “the Classical.” What Hamilakis omits is a fundamental tension within Greek archaeology, between a classical archaeology partly shaped by a German example, and a prehistoric archaeology influenced by American and British ideas. In most areas of Greece, classical archaeology is dominant, and “the Classical” is used to define what is unarguably and essentially Hellenic; but not in Crete. Here, classical archaeologists are in a minority, and it is essentially the Bronze Age that is elevated as the essence of Cretanness.

This tension (between a national archaeology focused on the Classical, and a regional archaeology focused on “the Minoans”) in turn creates further complications (see papers in Hamilakis and Momigliano 2006). It does not however much concern Praisos, except as an explanation for its comparative neglect between 1902 and 1992. More relevant is the division of interest that has grown up between what the Archaeological Service, as custodians of the Greek past; the research interests of Greek universities, shaped in part by international theoretical agendas; and what the locals want from their archaeology. Rescue excavations conducted by the Archaeological Service, both from a Geometric cave tomb near Hagios Spiridhon (Tsipopoulou 1984; 1987; 1990) and from excavations conducted on the First Acropolis by Nikos Papadakis (Blackman 2002, 112) and Chryssa Sophianou (Morgan et al. 2010, 178; Sophianou 2010) have inevitably taken finds away from the site to the museum in Siteia. These excavations were conducted specifically to forestall the actions of *archaiokapeloι*. But not all locals with an interest in the past are *archaiokapeloι*. Towards the end of his life, Manolis Figetakis started to help the Archaeological Service (and other researchers; see below) in their endeavors, and his son is now a leading figure in a local antiquarian society, led by Nikos Kokkinakis.

British Research since 1992: The “Praisos Project”

In 1992, when a team from Cardiff University brought renewed interest to Praisos, it did so for reasons that were partly processual. The aim of the first season was to

complete a new and more accurate plan of the site, and so better to understand how the urban structure of Cretan cities differed from mainland ones (Whitley, O'Connor and Mason 1995). This topographical survey was always conceived, however, as the first step in a wider investigation into the site and its environs, as an attempt to understand the settlement history of the area, and place the city within its local setting. Our survey was to be truly diachronic, and fully engaged with the *longue durée*—we would not be focusing on the Bronze Age, and indeed found the hardening of boundaries between Aegean prehistory on the one hand and classical archaeology on the other to be increasingly unhelpful. The next step had to be fieldwalking, that is, “survey” in its wider sense. In the 1980s in particular field survey had been the subject of heated methodological debate. It was agreed that intensive was better than extensive survey, and the model to be followed was Boeotia (Snodgrass 1987, 93–131). This model, well suited to the rolling plains of the area around Thespiiai, did not suit the dissected landscape we had chosen as our survey area (fig. 2.3). An alternative model, provided by the Keos survey (Cherry et al. 1992) seemed more suitable. This was to divide the landscape into irregular tracts, which could be covered by teams of irregular size (Whitley, Prent and Thorne 1999, 221–4). We hoped to apply this model to the problem of urban survey (Alcock 1992).

Further problems emerged, however. Our survey was intensive and so we were much concerned with recording the density of finds on the surface. We had hoped to make some kind of contribution to the debate about background noise and ancient agricultural practices (Alcock, Cherry, and Davis 1994; Snodgrass 1994, 199–200). We were conscious of factors such as visibility—that we would see more, and so record more finds, when the vegetation was sparser. We were then surprised when we discovered that, in many areas of high visibility (in particular newly-planted olive trees) the recovery of finds was close to zero. Often, finds would be recovered not from the field itself, but from what seemed to be a pile of rubble by its side. The reason for this was simple: earth-moving equipment had been used to clear fields of vegetation in advance of planting new olive trees, thus removing (or “skimming”) all the finds from earlier dates. In practice there were two major factors affecting the recovery of finds. First was background geology—marls were easy to clear with bulldozers, schist slightly less so, and karst limestone almost impossible. So the *best* finds came from areas of karst limestone. Second, some of the area had for some time been designated an *archaiologikos choras* (archaeological site), and this was divided into an Alpha and Beta zone. No agricultural activity was allowed in the Alpha zone (i.e. the First Acropolis).

A bigger problem arose when trying to date the finds we did recover. The only complete ceramic sequence in Crete is that of Knossos, whose utility for surface finds is severely compromised by Crete's ceramic regionalism. Though the Bronze Age sequence of eastern Crete was fairly well understood by this date, it was continually being refined by excavation at Palaikastro, Petras and Zakro. Neither the Neolithic nor the Early Iron Age and later periods were well understood in ceramic terms—there

was no obvious sequence of stratified deposits to which we could closely relate our surface finds. To illustrate the problem it will be convenient to contrast our approach and our methods with those of two neighboring surveys. The first was an extensive survey, conducted over many years by Norbert Schlager in the areas around Zakro. The methods of this survey seem hardly to have been affected by the debates of the 1980s, but it did turn up sites which provided useful comparanda with our survey, notably a number of upland or cave sites with deposits of Middle Minoan II fine ware cups (Schlager 1991; 1992, 1995; 1997; 2001; Schlager and Dollhofer 1998). Another, more intensive survey was conducted in two flat upland basins around Ziros (Brani-gan 1998), which had an explicitly Bronze Age focus. Here the methodological stric-tures of the 1980s were taken to extremes. Only flat areas were surveyed, since only on flat areas would the chosen methods work. This survey produced convincing pat-terns of density of finds. However, only three culture periods were distinguished: the Neolithic, Bronze Age, and the Greco-Roman. Only a handful of Archaic to Hellenistic potsherds were identified from this survey—a degree of imprecision that would have rendered urban survey of Praisos fairly pointless. Our ceramic chronology, thus, had to be more refined than this. The problem of dating finds was resolved over many study seasons, with the help of outside experts: Brice Erickson for the Archaic and Classical finds (Erickson 2010), and Natalia Vogeikoff-Brogan for the Hellenistic. The complete publication of the known Iron Age pottery in the area (Tsipopoulou 1992; 2005) proved invaluable.

There were further complications. Hitherto, dating of survey finds had been based on the sequence of painted fine wares from sites such as Knossos. But the Kavousi (Haggis and Mook 1993; Haggis 2005), Vrokastro (Hayden 2005; Moody 2005) and Sphakia (Moody et al. 2003) surveys had taken an increasing interest in coarse wares, both for dating purposes and to establish exchange relations between regions. So this line of research had to be pursued too, and is now being undertaken by Jen-nifer Moody.

The above account suggests that there was a clear processual direction to our research—one of increasing precision and increasing refinement of methods. This is only part of the picture, though. When we revisited the survey area during our study seasons, it was clear that the human and natural landscape was changing. Agricul-tural practice was shifting from the kind of labor-intensive practice associated with “traditional” agriculture (as in Halstead and Jones 1989; Blitzer 2004). Mixed farming in small plots was being replaced by capital-intensive investment either in herding (sheep and goats) or olives. The land was being depopulated, young people were moving to Athens and the coast, and the inhabitants were (increasingly) elderly. Increased bulldozing led to the destruction of Venetian/Ottoman *kaldirimi* and sites we had identified, and a realization that survey was a form of rescue archaeology. This realization in turn led to a more “phenomenological” understanding of our survey practice. Mieke Prent voiced the view that the three hills of the “refuge” settlement at Kipia above Kalmafi (site 40 in fig. 2.3) might be “referenced” in the three *acropoleis*

of Praisos, when the inhabitants moved from the upland settlement to the lower one in the latter part of the Early Iron Age (Whitley, Prent and Thorne 1999, 251 n. 112). Continual study of the material also involved the evaluation of earlier scholarship, and the various traditions it encompassed: it became apparent that this “phenomenological” understanding of the landscape had been anticipated by French scholars. This change in understanding could then be seen as an example of increased “reflexivity,” but it does not represent a straightforward move from a processual to a postprocessual position.

Indeed, it is hard for me to describe where the Praisos project lies on a scale of traditional, processual, postprocessual and (presumably) post-postprocessual archaeologies. Theoretical interests have tended to multiply as the project has developed, since the study of Praisos does not exist in isolation from other academic interests. Praisos, being a Cretan city, is relevant to the question of “Cretan exceptionalism,” the nature of the Cretan poleis (Whitley 2009; cf. Wallace 2010), Cretan epigraphic habits (Whitley 1997) and other forms of “material entanglement” (*sensu* Hodder 2011). Survey has reinforced an existing interest in the relation between ethnicity and material culture (Whitley 1998; Whitley 2006a) and in the “phenomenological” relationship between a city and its sanctuaries (Whitley 2008; Prent 2005, 302–9; Erickson 2009).



Figure 2.4: Excavation (2007) outside of the Almond Tree House/Andreion on the first Acropolis of Praisos (view from NW) (photo S. Pak; Praisos Archaeological Project).

Excavation in 2007 led to a further proliferation of theoretical problems and interests. We opened three trenches just to the North and West of the Almond Tree House, excavated by Bosanquet in 1901, which he had interpreted as an *andreion* (fig. 2.4; Bosanquet 1902a, 259–70; Whitley 2011). Our original intention was to excavate Cretan houses, and to try to get to grips with why Cretan houses were so much smaller and simpler than mainland ones in the Classical and Hellenistic periods (Westgate 2007; cf. Glowacki and Vogeikoff Brogan 2011). We had also hoped to use some of the techniques developed at Çatalhöyük for understanding activity areas through micromorphology and microstratigraphy (Matthews 2005a; 2005b). But in order to reach the house levels we had to dig through Bosanquet’s dump, which was full of drinking vessels. This inevitably led to further thoughts about Cretan commensality, and the possibility that the forms of “diacritical feasting” encountered in Crete in the Middle Minoan period (Haggis 2007; Dietler 2001) might not be too distant, in terms



Figure 2.5: Archaic pithos (pithos 3) found on Hellenistic floor in 2007 (A-216.10 rim; A-216.13 base) (photo S. Pak; Praisos Archaeological Project).

of function, from the “diacritical feasting” as represented by deposits both within the city (Whitley 2011, 40–41) and contemporary sites of feasting in the *chora*, such as our site 14 (see site 14 in fig. 2.3, also known as Prophetis Elias; Whitley, Prent and Thorne 1999, 249–253; Whitley 2014; Erickson 2010a, 199–220; 2011). Having dug through Bosanquet’s dump, the floor levels we reached did seem to confirm the date of Praisos’ abandonment (but not destruction by fire) in the years around 140 B.C., and provide more evidence for the relative simplicity of Classical and Hellenistic Cretan houses (Westgate 2007). But they provided another surprise: many of the pithoi, which appear to have been left on the floors, were not of Hellenistic but Archaic in date (fig. 2.5), and many seem to have been made elsewhere in Crete, perhaps in Afrati (Brisart 2007; Whitley 2011, 27–33; see Galanaki et al. in this volume). This pattern is not confined to our site (Vogeikoff-Brogan 2011) and raises questions about the agency (*sensu* Gell 1998) of storage vessels in Crete as compared to the rest of the Aegean in historic times.

Conclusions

The Praisos project is one conducted within multiple “paradigms.” For example, in our attempt to interpret the deposits outside the “Almond Tree House” we are employing many of the methods of traditional classical scholarship. This involves both the reinterpretation of ancient texts that mention the *andreion* and the iconography of the male figurines we found in Bosanquet’s dump (fig. 2.6). Study of such figurines requires the use of well-established methods (see Nicholls 1952), and for iconographic comparanda we had recourse to Beazley (Whitley 2011, 16–19; Beazley 1986, 53–54 and pl. 49; *ABV*, 152 no. 27 (Boston 01.8027)). At the same time, such re-interpretations require some knowledge of modern debates about commensality (Dietler 2001).

As the project has developed, I have gained a greater respect for the scholars who have worked on this area in the past, and the intellectual traditions that they represent. Putting Evans or Bosanquet in a box labeled “culture history” is a convenient means of not treating them seriously. One of the strengths of classical scholarship, after all, and one of the features that distinguishes it most strongly from prehistory, is that the discipline requires you to approach your intellectual forebears both as men and women of their time and, in some sense, as your intellectual contemporaries. Herodotus, Thucydides and Plato have to be engaged with, not simply dismissed as “men of their time,” but as intellectuals whose insights you have to respect. This is not so much an acknowledgement of the necessity of “reflexivity” as an acknowledgement that the German philosopher, Hans Georg Gadamer (1975) might have been on the right track when he talked of a “fusion of horizons.”

This is not however to endorse either an unthinking “whiggishness” or an unthinking relativism. Not every theory is equally good—they have to be tested against some



Figure 2.6: Terracotta plaque (A-205.7 object 6) recovered from upper layers of trench 200 (photo J. Whitley; Praisos Archaeological Project).

kind of empirical reality. Not every theory is compatible with every other; and the recent attempt, for example, to force Gell's concept of agency into a postprocessual mold, to make it compatible with Saussurean semiotics, is clearly misplaced (Whitley 2012). Such theoretical "shotgun marriages" can only lead to incoherence.

Clearly some things have progressed over the years compared to the state of archaeological methods in 1900—we have much more precise information, and are able to address a wider range of questions in a more systematic fashion. We are also, in some senses, more "reflexive," since in 2007, like many other foreign-school projects in Greece (Stroulia and Buck Sutton 2010), we began to work much more closely with the local community. But developments over the long twentieth century have not been straightforwardly linear or cumulative. Sometimes paradigm shifts can be, in effect, reactionary. One such is the increasing textualization of inscriptions (that is, treating them as decontextualized texts, and not objects whose materiality and agency need to be taken seriously) that seems to have taken place throughout the twentieth century. Margarita Guarducci and Lilian Jeffery (1949; 1990) were unusual among epigraphers in continuing to respect both the materiality and the context of the inscriptions they studied. More recently, the Cambridge trend towards "Classical Art History" (e.g. Squire 2012) has downplayed both materiality and context, resulting in a similar kind of post-structuralist textualization of ancient material culture.

Finally, diachronic survey projects have a habit of trampling over sub-disciplinary boundaries. Elsewhere in the Mediterranean, the problem is often that classical archaeology and prehistory have developed along quite different lines. In Crete, the problem is the "Minoans" (Hamilakis and Momigliano 2006). Aegean prehistory and

classical archaeology have become strangers to one another. In our survey, it is not simply that we need to adopt a fully diachronic approach to the *longue durée* of settlement and landscape history. It is rather that debates about such things as the nature of Cretan state structures in the Bronze Age and in the Archaic and Classical periods have been conducted in isolation from one another. This is particularly odd in view of the fact that it is increasingly acknowledged that the success of both Bronze Age and Iron Age political structures (*poleis*) depended upon forms of institutionalized commensality. But that is another story, for another article.

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Carla M. Antonaccio

3 Re-excavating Morgantina

Abstract: The Princeton University Archaeological Expedition to Sicily was launched in 1955 as a training excavation for graduate students in the Department of Art and Archaeology. Morgantina was chosen from among widely scattered possibilities in the Mediterranean in part because it met a list of criteria—including the availability of fresh water, ease of access, and the likelihood of significant finds—and not because of an overarching research question or design. The site was excavated in continuous seasons from the first year to 1968, under the direction of two professors in the Department of Art and Archaeology: Erik Sjöqvist, formerly Director of the Swedish Institute at Rome, who had joined Princeton's faculty in 1946; and Richard Stillwell, who also served as the Editor in Chief of the *American Journal of Archaeology* from 1954 to 1973. Work then continued under the direction of a succession of Princeton PhDs until the present.

Though preliminary reports were swiftly published in the *American Journal of Archaeology*, and many articles written by both faculty and graduate students in a number of scholarly journals, there was never a comprehensive plan for publication, and although some artifact storage was created in the nearby town of Aidone, there was no local museum until 1984, long after Princeton had passed from the scene. The project presents the challenges of re-excavating an old excavation: in effect, of doing salvage archaeology on old data, and integrating it with new research questions and excavation. The quantity of data is large and could not now be easily recovered; nor can it be discarded or ignored. Thus, this paper will consider some questions that can be asked and answered with older data, and how the Morgantina project can be repurposed sixty years after its first season, focusing on the Archaic phase of the site.

Founding a Post-War Excavation

In 1953, Erik Sjöqvist, only recently arrived at Princeton University, reported to University president Harold W. Dodds the results of his search for a suitable site for excavation by the Department of Art and Archaeology just a few years after the close of the Second World War. This department, whose origins are often traced to the appointment of Allan Marquand in 1883, had already fielded a number of projects in the prewar period, working in Syria (1904–1909), at Sardis (1910–1922), and Antioch (1932–1939), and had had a long history of archaeological fieldwork. T. Leslie Shear had been the first director of the excavations in the Athenian Agora, founded in 1931, though under the auspices of the American School of Classical Studies at Athens, rather than the University (Dyson 1998, 162–168). Another distinguished member of the department was Richard Stillwell, appointed in 1926, after earning his B.A. and M.F.A. at the University. Stillwell had spent many years in Athens, as Assistant Director and Director of the American School of Classical Studies, assistant field director in the Agora, field director of the Corinth excavations, among other positions and responsibilities. He had also worked at Antioch and Kourion in addition to Corinth and would eventually publish a large corpus of work on the architecture of these

sites. Stillwell was also Editor in Chief of the *American Journal of Archaeology* from 1954–1973 (Shear 1983). In short, Princeton had had a long and distinguished history of archaeological research and fieldwork before the war, and afterward had in place the staff and some of the resources to renew its endeavors (though Shear died in 1945). According to Dyson, in the postwar period, “Princeton remained the most important American classical archaeology graduate program during the twenty-five years following World War II” (Dyson 1998, 232).

Erik Sjöqvist, who was prospecting for a new site in the Mediterranean, joined the department in 1951 and was on the faculty for 18 years. Sjöqvist had a distinguished career before coming to Princeton. He had been part of the Swedish Cyprus Expedition, was Director of the Swedish Institute in Rome from 1940–1948 and had served as the personal secretary to Crown Prince Gustaf VI of Sweden (himself a trained archaeologist). Papers held in the archives of the Department of Art and Archaeology include many documents related to Sjöqvist’s immediate postwar search for an archaeological site that Princeton could excavate, under its own auspices, culminating in his report to the president, written after a period of intensive travel and scouting. The reasons for starting a new project were recorded in the memorandum: “The general aim of archaeological fieldwork [is] of promoting scholarship, stimulating teaching in classical art and archaeology on the university level, and enriching the museums.” These aims must take precedence over any other criteria, but “the scholarly value of the site should be placed at the top.” Nevertheless, the document goes on to list seven desirable criteria for any site selected: the climate should not be too extreme; the site should be “fairly accessible” both in case of emergency and to limit the costs of travel; good drinking water should be available; local labor at “reasonable cost” was desirable; local authorities should be amenable; the “political desirability of the expedition” should be affirmed by American authorities both home and abroad; and lastly, “The advantages of a site should finally be weighed against the cost of running it.” From the beginning (and in the next paragraph, underlined) the problem of finance was identified. Sjöqvist sought to support the excavations for at least five years, excavating for 100 days a year, and it was envisioned that the excavation would be directed both by Sjöqvist and his colleague Stillwell.

In the memorandum laying out the benefits of an excavation led by Princeton, Sjöqvist hoped that the site would be well-known and thus of interest “to a circle wider than that of the specialists, the scholars and the students.” Such an expedition might create opportunities for new fields of research, or for international collaboration under Princeton’s auspices, which would be good public relations. “Finally, if the local legislation is liberal, the excavations may enrich the Art Museum of Princeton and tangible “revenue” may return to the institution sponsoring the expedition.” In the period leading up to the First World War, “partage” of finds, though not always smooth, was expected—a return on the investment of funds, personnel, and labor on the part of foreign institutions. Princeton itself had benefitted from this system,

receiving mosaics from Antioch and enabling material from Sardis to come to the States, though not without controversy. In the end, the choice of Morgantina would moot the last hope, since Italy did not allow for such a division of finds (see further below).

The possibilities that Sjöqvist investigated and reported to President Dodds were widely distributed around the Mediterranean: Heraclea on the Tyrrhenean coast of Italy; Morgantina in Sicily; Clazomenai on the Ionian coast of Turkey; and Ptolemais in the Cyrenaica of Libya. The first two represented opportunities that were possible only because foreign excavations were allowed in Italy after the war, with changes in Italian law (Dyson 2006, 238). A serious conflict of interest over Ptolemais with Italian claims is revealed in the correspondence, since after World War II the Italians, who had been working on the site, were excluded. Clazomenai presented many difficulties and was of uncertain promise with respect to preservation of archaeological contexts, and access. Sjöqvist expressed doubts about Heraclea's importance and the possibility of Hellenistic levels, as well as the availability of its cemeteries for excavation. Though he detailed the pros and cons, and estimated expenses for all four possibilities, it is clear from this report that he favored the then anonymous site on the Serra Orlando ridge in central Sicily, in the province of Enna and a short distance from Piazza Armerina. As Sjöqvist notes, Luigi Bernabò Brea, the then superintendent of antiquities at Syracuse, had recommended the site to him. A firsthand account of the conditions on the site, dated to 1926, is also in the Princeton expedition archive, in Italian and signed by one Rosario Carta. The source is unknown, but may have been given to Sjöqvist by Bernabò.

Although he noted the potential of the Sicilian site to contribute to knowledge of Greek and Roman art and architecture as demonstrated by visible remains and finds in the Syracuse Museum that had come from the site (Paolo Orsi had investigated with trial trenches in 1912: Sjöqvist and Stillwell 1957, 151), already in the 1953 memo, Sjöqvist outlined an unusual interest in the non-Greek, or "Graeco-Siculean," character of the site. As he put it, "Greek colonists, creating urban life in indigenous surroundings and growing wealthy by agriculture, trade, and warfare through the long centuries of Sicilian independence, most probably stand for an unknown *facies* of Greek civilization, well worth studying." (The term *facies* here means a distinctive cultural complex or tradition.) He added, "Together with Greek artifacts one can expect to find local Siculean objects. The latter are notoriously poorly known and uncertainly dated, and light could be shed on their history and development by an excavation of Serra Orlando. Further, it should not be excluded that the Greek city is superimposed on a pre-existing Siculean site. In such a case an interesting prehistoric sideline could be followed up." The report concludes with an estimate of annual expenditures (including compensation for damaged crops). Sjöqvist's interests and arguments were formally and eloquently echoed by President Dodds in an official letter to the Minister for Public Instruction in Rome, seeking permission to begin work: "The scholarly problem, to the solution of which we hope to contribute, is inherent

in the question of the manifold interaction of Greek, Italic and Roman Civilization on Italian soil and in the Italian cultural climate.” The rich prehistoric record that was eventually uncovered came to involve the distinguished Swedish scholar Carl Erik Östenberg, and later Robert Leighton, who would publish the late Bronze Age and Iron Age phases (Leighton 1993; 2012). The choice of Morgantina, then, confirms an observation by Dyson, that sites tend to reflect the interests and attitudes of their directors, but by the same token, Stillwell’s focus on the monumental architecture of the site confirms another observation: that the methods of long-term and high-status projects such as Corinth and the Agora, where Stillwell had long been engaged, were far-reaching (Dyson 1998, 233).

The Accidental Big Dig

It may be surprising, but Princeton did not in fact have the funds to finance an excavation itself, despite its prominence and obvious wealth of various resources: distinguished faculty, libraries, a graduate program, and a tradition of fieldwork. Once the site had been chosen, Sjöqvist, the office of the president, and the then chair of the Department of Art and Archaeology, E. Baldwin Smith, mobilized to identify sources of funding, starting with private foundations. But whereas Rockefeller money had supported the huge undertaking of one of the archetypal big digs, the Athenian Agora, such largesse was not extended to Princeton for Morgantina. The archives are full of letters reflecting the efforts to identify private donors as well as possible philanthropic organizations. In the days before the National Endowment for the Humanities (founded in 1965) and other sources, funding for American archaeology came from institutions and private individuals. (The National Science Foundation was created in 1950, but archaeology in these Cold War days would not have been an appropriate grantee.) Efforts to secure funding extended through 1954 and into 1955. Ultimately, the Bollingen Foundation (an arm of Mellon philanthropy) came through with a guaranteed fraction of the means required, and the University’s own funds in support of research matched the sum, with a contribution from the department’s funds for research support. Combined with other donations, the resources to permit a first season of work only materialized just in time: the lease of the site that had been arranged had to be extended to 1955, and if funding had not been secured, the project would likely have been abandoned. At the same time, Sjöqvist was seeking the necessary permissions from the regional and national Italian authorities. Nevertheless, President Dodds’s letter to the minister of public instruction in Rome guaranteed the funding, including for publication, and stated: “It is now our intention to revive [an] old and honorable tradition by sending again an archaeological expedition to the classical Mediterranean lands.... The University... intends to undertake its investigations on a large scale and with thorough and modern methods.”

Dodds's words certainly express confidence and ambition. Thus Dyson states: "After the Athenian Agora, Morgantina was probably the most important American classical excavation in the postwar period (Dyson 1998, 232)." Rather, Morgantina was an accidental "big dig." It was never envisioned to continue for six decades. In addition, at Morgantina there was no local museum and no local archaeological authority until the 1980s. Although Morgantina trained a number of students who were later distinguished professionals—Kenan Erim, who clinched the identification of the site as Morgantina (Erim 1958), R. Ross Holloway, Mario Del Chiaro, Thomas Hoving, Stephen Miller, T. Leslie Shear, Jr., and Stephen Miller, as well as the future director, Malcolm Bell—it never had the resources or the infrastructure of a long-term and expansive project such as the Agora Excavations of the American School, or its dig at Corinth, to say nothing of Delphi (French) or Olympia (German). This is due in part to the different ways in which archaeology was sponsored and permitted in different countries; foreign schools of classical studies and archaeology in Greece themselves organized and sponsored excavations. But in addition, American excavations have always relied on unofficial, private funds from foundations and individual donors, or from universities themselves, rather than direct funding by governments. Since the project was never intended to go on for more than five years, there was no plan for long-term direction or publication: all results were presented in a series of "Preliminary Reports" in the *American Journal of Archaeology* and some articles (Bell 2010), and the alternating direction of the site was interrupted by Stillwell's retirement (in 1967) and by Sjöqvist's ill health, which forced him out of the field two years later. It was only after Princeton had withdrawn from active direction of the work on the site that an NEH grant was secured by Stillwell, who must be credited for reviving the project and for putting all the excavations of the 50s, 60s and 70s on the road to study and publication, mostly by a second generation of Princeton students and collaborators. The plan was for two years of study, and other funds were secured for publication by Princeton University Press of a series of volumes of *Morgantina Studies*—another attribute of the big dig (Childs 1979). In the event, the supposedly final study seasons of 1978 and 1979 were extended into new campaigns of excavation under the auspices of the University of Virginia, with Malcolm Bell directing, and ultimately involved a second and a third generation of investigators with Princeton degrees (including this author).

Another observation of Dyson's (2006, 232) needs to be contextualized as well: that Morgantina "followed in the big dig tradition of the Athenian Agora, importing many of the methods and attitudes of the Agora excavations into Sicily." These methods and attitudes constituted what he calls "a very conservative tradition." It is certainly true that the methodology, even during the 1960s, was traditional. Princeton took advantage of recent aerial photography to create a base map of the site that is still in use, and a Princeton geologist, Sheldon Judson, studied the geology of the site (his manuscript remains unpublished). It created a grid system but did not use it in the then-modern Wheeler-Kenyon fashion; it was used solely to record the locations

of trenches. Dodds's "most thorough and modern methods" were indeed traditional: the deployment of a massive workforce and, after initial attempts to remove large amounts of earth by mule cart, a Decauville narrow gauge rail system to remove earth. Since the initial excavations had focused on where the directors correctly placed the Agora, the progress of the excavation simply expanded from that point. The digging followed the architecture, and resorted to long, narrow exploratory trenches to test the extent of occupation. In keeping with the practices of the time, coarse wares, roof tiles, and the like were discarded.

Yet, while the influence of the Agora and Corinth via Shear and Stilwell cannot be denied, these statements are counterbalanced by Sjöqvist's Mediterranean interests and extensive Italian experience before the war, and by the orientation of the third director of the project, a Princeton PhD named Hubert H. Allen. Work continued from 1968 to 1972 under his direction after the withdrawal of both original directors. Allen experimented with magnetometry, as well as with balloon photography and radiocarbon dating, and his writings attempted to fit developments at Morgantina into a wider and contemporary framework in archaeology—processual and even Marxist, at least with respect to the earliest history of the site. He also wrote about the local pottery tradition (Allen 1976–77, 1977). But in particular he shared with Sjöqvist a keen interest in the Sikel population and its culture (see further below).

Excavating an Excavation

While excavation has continued since the 60s, as noted above, it has never been as extensive or as intensive as in the earliest days of the expedition. Most work since the 1980s has been undertaken to clarify the extent of habitation, chronology, the date of the city's orthogonal plan, and to complete excavation of important features, such as the Hellenistic bathing facilities in the western edge of the Classical and Hellenistic city on Serra Orlando, and the many public buildings of its agora (Lucore 2013; Bell 1988). Some other efforts in essence "reverse engineered" the project, undertaking a survey of Morgantina's territory in the late 90s (Thompson 1999), and the restudy of old material using methods, such as pXRF, not available a half century ago (see below). Recording is now largely digital, with a program to digitize old archives in the planning phases; materials and residue analysis are being undertaken, and new investigations with remote sensing on unexplored parts of the site.

In 1990, the last direct responsibility for publication passed to me. I took on the coordination of work on the Cittadella—the focus of Archaic settlement at Morgantina (fig. 3.1). The Cittadella will form the focus of the remainder of this chapter.

Located on a hill and two terraces to the east of Serra Orlando and the later city, the Cittadella was sporadically explored by Princeton in the 1950s and 1960s, and further by Allen in the 1970s but was never the object of a sustained or continuous

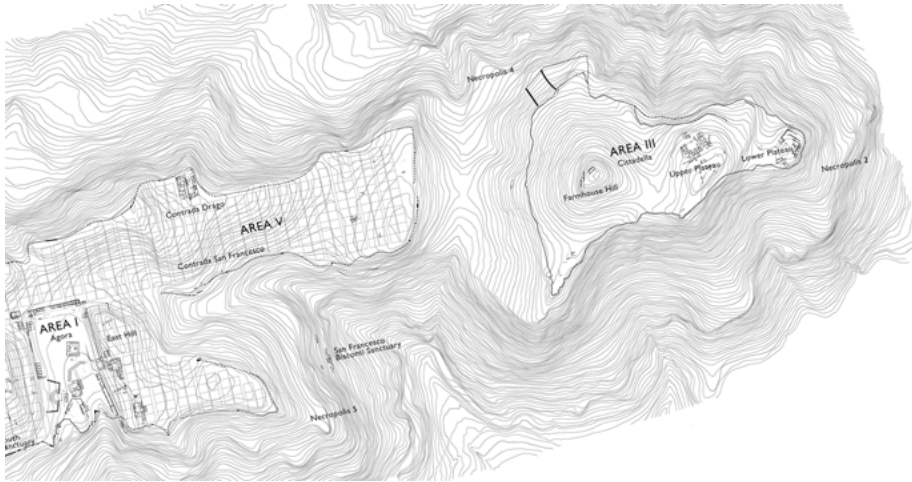


Figure 3.1: Map of eastern Serra Orlando Ridge and Cittadella (drawing E. Thorkildsen).

program of excavation (see Bell 2010 for the full bibliography). Nevertheless, the work accomplished in the early years yielded several important results. One was that this area had been the locus of an Archaic settlement in the sixth and fifth centuries B.C., and that it had suffered a destruction in the mid-fifth century B.C., consonant with the ancient sources which attributed the event to the sack of the city by Sikels united under their *hegemon* Douketios (11.76–78). Another was that there was a pre-existing settlement of Iron Age longhouses located on the same slopes. A third was that the area had seen reoccupation in the third c. B.C. It was also known that several *temene* marked the extreme edges of the settlement, including the acropolis known as Farmhouse Hill and the lower terrace of the Archaic site, as well as on the far eastern margin of the Serra Orlando ridge. Finally, it was known that both Iron Age and Archaic, as well Hellenistic, cemeteries encircled the Cittadella, which also had its own defensive circuit already in the Archaic period.

Allen's work had led to the first discovery of Iron Age tombs and helped define the limits of the settlement, including the knowledge that Archaic houses existed outside the city walls and but above the chamber tombs further down the slopes. Indeed, his plan for publishing the site treated the entire habitation of Morgantina from the Bronze Age to the Archaic period as essentially one cultural phase, and he was very interested in essential continuities in the material culture and history of Morgantina. Adhering to the culture history methods of the day, he ascribes Ausonian pottery to ethnic "Morgeti" from southern Italy, and described the phases of the site as "Morgetian" (see further below).

Meanwhile, the original interest of Sjöqvist in indigenous populations culminated in his late Jerome Lectures at University of Michigan and published as *Sicily and the Greeks* (Sjöqvist 1973). But as reflected in most of the preliminary reports, excavations

were not aimed at recovering the early history of the site: rather, the earliest evidence for occupation turned up in the pursuit of the Greek city. The local pottery went largely unstudied and unpublished, while the most impressive or highest quality Greek artifacts, for example a red figure krater by Euthymides, were meticulously restored and studied, largely without close attention to their context (Neils 1995).

This changed somewhat under Allen, who renewed investigations on the Cittadella. Two circumstances brought more extensive evidence for the prehistoric and early historic phases to light: an illegal excavation on the summit of Farmhouse Hill in 1967, and the cutting of a forestry road around the base of the same hill. On Farmhouse Hill, subsequent rescue excavations revealed not only the largest Greek style sacred building ever to be discovered—an early sixth c. *naiskos* with elaborate terracotta roof, but beneath its floor, earlier structures that preceded the temple and belonged to the Iron Age phase before the establishment of a nucleated settlement using Greek building techniques (including tiled roofs). The road cut below revealed the first complete Iron Age longhouse, and on the saddle between the upper and lower terraces of the area, Allen expanded a deep trench excavated by Östenberg in 1961–63. This trench turned out to have the deepest stratigraphy on the site, with successive phases of habitation from the tenth/ninth c. B.C. (Allen 1974; Leighton 1993).

Identity: Acculturation, Assimilation, Hybridity

In the Cittadella settlement of the sixth c., and in the tombs of the same period, Sjöqvist had realized the significance of the mixed assemblages that the burned Archaic city produced, though publication focused on the choicest Greek objects, such as the Euthymides krater. However, some chamber tombs, with their combination of indigenous grave goods and practices together with Greek imports, were published with their contents sorted into Greek, colonial, and indigenous (though not completely accurately; Sjöqvist 1958, pl. 30).

In the years since Sjöqvist's synthesis of 1973, we have through very limited excavation and intensive study—excavating the storerooms and archives for overlooked data—much more evidence for the Cittadella settlement, its history, and its cultural expressions. We now have completely excavated and published the largest Iron Age longhouse so far discovered on the island, and restudied all the late Bronze Age and Iron Age material and remains. We can also provide details about Morgantina's local and Italian mainland connections, elucidating in particular the so-called Ausonian culture of the Final Bronze Age (1100–1050 B.C.: Leighton 2012, 22) that Sjöqvist, Östenberg, and Allen had already noted. The thorough study of this phase, and of the Iron Age and Archaic tombs, has laid the groundwork for re-evaluating the Cittadella settlement itself. Moreover, the Italian rescue excavation and continued exploration of an extramural sanctuary at the eastern end of Serra Orlando, initially discovered

by illegal excavators, has altered our understanding of the cultic landscape and also the settlement history of the ridges. This sanctuary produced, among a tremendous number of dedications, Archaic Greek acroliths in Thasian marble that were among the illegally trafficked objects returned to Italy in recent years (Marconi 2008; Raffiotta 2007; fig. 3.1).

This sanctuary, possibly to be connected with the tombs higher on the slope, is not the only evidence for Archaic occupation on Serra Orlando. A *naiskos* had already been uncovered in the 1960s on the plateau above the San Francesco ravine. The tombs and sanctuaries signified occupation of the eastern ridge already in the Archaic period, as noted by Sjöqvist (1973, 46). But the extent of occupation and its implications for the topography are only now becoming clearer.

The Archaic settlement itself seems to represent less an episode of secondary colonization, or an *emporion* (Neils 2003), or at least at the time of its appearance, as a *phrourion* (Sjöqvist 1973, 37), but rather a punctuation mark in the history of the community. It is not entirely clear when the Iron Age longhouses were abandoned, but their destruction by fire, whether deliberate or accidental, all at the same time or episodic, preceded the construction of a new nucleated settlement utilizing Greek building forms, and the proliferation of sanctuaries on the edges of the settlement. This type of settlement was called a *ktisma* by Sjöqvist, an unfortified Greek settlement, though he also called Morgantina in this period a *polis* (1973, 35) as Diodorus does (though he may be referring to the re-founded city on Serra Orlando). But though this settlement is marked by its urbanized form and some monumental buildings, it was not laid out on a grid, and the material culture was distinctly mixed—in the settlement as in the tombs. Indeed, nearly from the beginning of work at the site, the degree to which Morgantina should be considered “Greek” has been debated. In the Archaic period, signs point to an amalgam of local and Greek, in nearly every aspect of the material culture: pottery, building technology, burials forms, and language as well; graffiti on pottery from the site includes personal names in both Greek and Sikel and at least one imperative in Sikel (Antonaccio and Neils 1995; Antonaccio 1999).

Until recently the debate over this question was framed in terms of Hellenization: a process of acculturation that as its formulation implies, moved in a single direction toward the assimilation of the indigenous population and its culture. Indeed, Sjöqvist was convinced that by the late sixth c. the city was no longer oriented toward the Chalcidian cities of the eastern coast, and instead had become a Doric city, based in part on his emphasis on Doricisms in the inscriptions and in the name of the site itself (for a contrasting view, Procelli 1989). Indeed, he goes further and suggests that a change from a more Ionian orientation toward the cities of the eastern coast was effected by the imposition of control by members of the landholding class from Gela.

It is, however, very uncertain to argue from material culture directly to the presence of individuals of particular ethnicities or identities. To be fair, Sjöqvist is more subtle than this, and his argument is based in part on historical sources on the Greek

coastal cities (Gela in this case under the first tyrant of the Deinomenid dynasty, Hippokrates) together with evidence for a partial destruction of the temples on the margins of the city in S. Francesco and the lower terrace. But Sjöqvist wrote before the discovery and excavation of the chthonic sanctuary on the slopes below the S. Francesco temple, which seems to have been active already in this period and not affected by these events.

While we should not ignore the historical sources we have, we should also consider the complex discourse of material things and social and ritual practice that cannot be reduced to a reading of political control, as if we could be certain that artifact styles are indicative of state control or the presence of individuals of a particular ethnic or civic status or identity. Much has been written in recent years about alternatives to Hellenization—essentially a colonialist narrative—with recourse to theory drawn from colonial and postcolonial situations very disparate in time and place (e.g., Lyons and Papadopoulos 2002; Gosden 2004, Antonaccio 2009; Malkin 2011 and many others). Another strand of inquiry at virtually the same time was considering the archaeology of identity in a multiplicity of forms, including ethnic and cultural identity (Díaz-Andreu et al., eds., 2005; Antonaccio 2009). This is an ongoing discourse, of which Morgantina is a part. Recent work has stressed the ways in which Morgantina's material culture remains local and indigenous while accepting a wide range of Greek forms, from surprisingly far-flung places, including Lakonia, Athens, Corinth, Ionia and the coastal colonies (Lyons 1996; Neils 2003).

Indigeneity: Sikels, Sikans, Elymi

The persistence of the local and indigenous—what might be called indigeneity—is of particular interest (see Weaver 2004). Despite Sjöqvist and Allen's interest, and the work of Leighton and Lyons, renewed investigation of Morgantina's huge amount of already-existent data can still yield results, even when the material was not recorded or curated in ways that are now expected. Nevertheless, using artifact style as a straightforward index of acculturation has been selectively deployed to support historical and colonial narratives of an essentially Greek orientation. Morgantina's material culture is a complexly hybrid assemblage that resists interpretation not simply along the lines of Sikel and Greek, or Ionian and Dorian, but participates also in a discourse of indigeneity.

A particular type of ceramic helps to make these points about Morgantina's place in this discourse of identity and the construction of and persistence of indigeneity. The type of pottery was noted by the Princeton excavators, who referred to so-called "Sant'Angelo Muxaro ware" in some contexts on Cittadella (fig. 3.2). It was a category that was understood to be endemic to the west of Sicily, its typesite being near Agrigento on the southwest coast. They also frequently identified so called "Siculan"



Figure 3.2: Incised grayware basin fragment, Cittadella Trench 9, inv. no. 59-2138 (photo C. Williams)

pottery, that is, the matte-painted local wares of eastern and central Sicily (Allen 1972, 1977).

To pursue this further requires a short account of the indigenous inhabitants of Sicily, who are divided into three groups according to the Classical sources which describe them: Sikels in the east (including Morgantina); Sikans in the center, and Elymi in the west (Albanese Procelli 2004, 18–25 for a summary). The sources are contradictory and, as well, impose an ethnography on the island that may not reflect how its inhabitants identified themselves or used material culture to construct or express their identities (Skinner 2012). Nor do we have contemporary local narratives—for example myths—that can help. Morgantina had an eponymous hero, Morges, who came to Sicily from southern Italy and settled the place, but this classic example of the founding eponym is only related by Pliny, and fits within a pattern of other eponymous heroes such as Liparus (who founded Lipari), and Xuthos (son of Aeolus) who founded Xuthia, the native name for Lentini (Leighton 1993, 153; see Malkin 1998), among others.

As many researchers have observed, it is difficult to discern clear boundaries between these indigenous groups, whether in language (there are few inscriptions) or material culture. This has not hindered some from discerning a historical kernel in the myths, derived from material culture similarities. For example, Morgantina has pottery that is imported from the mainland, where it is deemed “Ausonian.” Since Morges is said to have migrated with his people, the Morgetes, from southern Italy, the pottery is used to bolster the literary source. The same can be said of the Elymi: they are reputedly descended from Trojan refugees (Thuc. 6.2.3; Strabo 13.1.53; see below) although there is also an eponymous ancestor, Elymos, in the traditions as well (Dion. Hal. 1.47). The Sikani, meanwhile, are either autochthonous or from Iberia, depending on the source (Thuc. 6.2.2, displaced also by the Sikels’ arrival and forced westward). Sikel is the best known of the languages, and is Italic (related to Oscan-Umbrian); Elymian seems at least to be Indo-European, and Sikan is so little known it resists identification.

All these groups share certain material traditions, including the production and use of matte-painted pottery. There are variations on these traditions across the island; sites, or groups of sites, tend to share preferences with respect to shape, deco-

ration, and assemblage so that it is possible to identify regionally specific tendencies. Thus we may be dealing with the possibility of regionalism rather than ethnic distinctions and firm boundaries between groups within Sicily.

The stamped and incised gray pottery identified by Princeton with its type site of Sant'Angelo Muxaro, seemed so distinctive with respect to the other local pottery that it was not ever thought it could be part of the Sikel tradition, or locally produced. In the excavations at Morgantina in east central Sicily conducted during the 1950s and 60s, when this pottery appeared in the lowest levels of the Archaic site, it was always taken to be "early," that is, sixth c. in date—even when it was found in contexts that were otherwise producing sixth and fifth century material. That is to say, its presence in assemblages dominated by so-called Siculo-Geometric and imported or colonial Greek pottery was not explained. This distinctive pottery was made from the Iron Age to perhaps the fifth c. B.C. (Cooper 2007). This pottery has a gray, sometimes very dark and gritty fabric, a burnished or slipped surface, and stamped or incised with geometric style decoration. The forms are varied: pitchers, cups, and large bowls are the most common. Both the forms and the decoration seem to be rooted in much older Italic and Mediterranean traditions going back to the Neolithic—Stentinello Ware, whose typesite is near Syracuse in eastern Sicily—but which is distributed in Calabria and all of Sicily. This is of course very far removed in time from the wares found at Morgantina, which seem also to be connected with late Bronze Age traditions at Mokarta in the west of Sicily but also Pantalica in the east (Cooper 2007, 70). And indeed, so-called gray wares, including incised and carinated forms, are found far to the east as well, in the Balkans and northern Italy, and made well into the Iron Age.

Since it predominates in western Sicily, and since some ancient sources state that the Elymians were pushed to the west of the island by the Sikels, possibly explaining the occurrence of incised graywares in the Bronze Age in eastern Sicily, this kind of pottery has been ascribed to the Elymi. The repertoire of motifs is widely shared among sites in west Sicily, and, in addition to the similarities in form, fabric and surface treatments, these similarities have been seen as an index of site interaction; meanwhile the distinctive combinations of shared motifs, have been explained as an index of local expression. There is also more than one fabric that can be visually distinguished, including a reddish variant; and some forms of this pottery are stamped and/or incised, some are combed, and some are plain. On some forms, cordons and attachments are applied. Thus, within the class, there is a wide range of variation, and the publications of sites that have produced it now include Sabucina, Entella, Colle Madore, M. Maranfusa, and Polizello (Cooper 2007, with references).

Robert Leighton has noted that incised grayware pottery in western Sicily is problematic as an index of Elymian ethnicity. But he has also suggested that this type of ceramic is "at home" in Western Sicily, though it did not come into its own until the Greek colonial period. Thus his explanation for its relative rarity in eastern Sicily in the late Bronze Age is that it has no real tradition for it there, while also suggesting it is not very Western until later. Yet there are some examples of incised graywares in

late Bronze Age and Iron Age Morgantina, and Leighton notes several examples of this type of pottery in transitional contexts as well as the seventh or sixth c. (Leighton 1993, 72–73; 2012, 98) some of these have been submitted to chemical and petrographic analyses; see below.) Moreover, “grayware” as a category has also been identified as an Iron Age tradition not only in Italy and Sicily, but in France and Malta; it has even been suggested that incised grayware imported from France has been found at M. Polizzo, a site in Western Sicily, based on formal similarities (Cooper 2007, 72).

It would be helpful to be able to understand more about the production and distribution of incised grayware in the island, beyond what its visually distinctive appearance. Did grayware pottery in central or eastern Sicily from the eighth c. onward come from the west? If not, do such wares share anything compositionally with locally produced pottery? If so we could think in terms of transfers of style, or the adoption of non-local but non-Greek forms at a time of otherwise intense Hellenizing during the period when Morgantina undergoes a process of urbanization (Antonaccio 1997). Such information, combined with a contextual analysis of assemblages, can advance our understanding about the locally specific culture of Morgantina in the Archaic period.

There are three analyses to which we can turn. The first was conducted in western Sicily itself: instrumental neutron activation analysis (INAA) was applied to a sample of 62 sherds from twelve sites in the west, the largest sample ($n=22$) from M. Polizzo, but including some from Sant’Angelo Muxaro ($n=2$) and Scirinda ($n=2$), both closer to Morgantina than the sites in the ambit of Segesta in the far west of the island (Kolb and Speakman 2005; Kolb, Tusa, and Speakman 2006). The various caveats about contaminated samples notwithstanding, this preliminary study identified five compositional groups, two of which were compositionally distinctive to the sites of M. Finistrelle and Monte Maranfusa. A further group seems to map to the Belice valley from the coast to the interior, and another group, the largest in terms of samples, is concentrated in the far west. From this the authors of the study deduce strong economic ties, a shared Elymian ethnicity, and shared clay sources, with Montagnoli a possible “nexus of ceramic exchange” since samples from the site could be assigned to three different compositional groups (Kolb and Speakman 2005, 801). They argue, in conclusion, for “a specific nesting of exchange networks.” Though they acknowledge that their sample and its distribution are limited, they nonetheless suggest: “the spatial coherence of our visible ceramic groups represents genuine regional patterns” (Kolb and Speakman, 2005, 797). In other words, they argue that their results tend to support a local identity, Elymian, associated with this type of pottery. However, since none of their samples came from any site outside the region defined by written sources as Elymian territory, this claim is not well supported, though the results may be useful at Morgantina.

As noted already, Leighton has fully published the excavation of a late Bronze Age longhouse at Morgantina, as of now the largest in Sicily (Leighton 2012). Leighton also restudied material from other early contexts at Morgantina (Leighton 1993) and

included it in his materials analyses. In addition, in 2012 pXRF was conducted on 20 grayware samples from Morgantina, recovered in the excavations of the sixth and fifth c. settlement and also some early, possibly seventh c., mortuary contexts. In 2012 our question was whether any of the incised at Morgantina might have been produced in western Sicily, so we did not attempt to divide the Morgantina samples into compositional groups. Instead, we attempted to see how the Morgantina samples fit the elemental profiles of grayware from western Sicily as defined by Kolb and Speakman.

For each sample the *ppm* values for the elements that were most readily compared to those in Kolb and Speakman for their five compositional groups were the focus. In some cases the *ppm* value of the sample could only fit one compositional group, while in others the value fell within the ranges of two or more groups—but was closest to one. There was not an exact match through all the elements studied for any sample, and some varied so much that no membership in any of their groups can be suggested.

Nine of the 20 samples, however, suggested membership in a group on the basis of multiple element “hits.” One sample fell within the parameters of Kolb and Speakman’s compositional group EL-2 for four of the five elements tested, and was closest to the average value of EL-2 for three of these. The group it closely matches is the one from Montagnoli—the site identified by Kolb and Speakman as a production and distribution center (fig. 3.3). It is interesting that this example is similar to reddish colored examples recovered at M. Polizzo. However, another fragment from just below this stratum at Morgantina was closer to group EL-5—as was the case for one of the samples from a tomb of the seventh c. at Morgantina (fig. 3.4). Group EL-5 was



Figure 3.3: Incised and burnished amphora neck fragment, Cittadella Trench 29, inv. no. 63-1207 and joining fragment (right) (photo C. Williams).



Figure 3.4: Incised grayware amphora or bowl fragment, Citadella Trench 29, inv. no. 67-388B (Leighton) (photo C. Williams).

assigned by Kolb and Speakman to Monte Maranfusa. Both of these sites are in the far west.

Of particular interest is a sample tested by us and also by Leighton, from a late Bronze Age context. Leighton thought it was perhaps out of context and much earlier—even Neolithic in date (fig. 3.5). Our results suggested Kolb and Speakman's group EL-1, characteristic of M. Polizzo most of all. Leighton's results suggested that this is an "outsider," and he noted the clay as more quartziferous. Petrographically, the matrix is siliceous—and therefore not local. Leighton summarized his results as follows: "It may be significant that three examples which diverge stylistically to some extent from the typical repertoire of the site... [h]ave better parallels in western Sicily, whereas the samples that are more consistent with eastern Sicilian styles have a volcanic feldspathic paste, which is more commonly represented in the Morgantina ceramics. This difference could relate to different centres of production" (Leighton 2012, 115). The volcanic elements at Morgantina are derived from Etna, and there is a local source for this material at Morgantina in the form of millstones. He concludes, however, that aside from the one outlier just discussed, he is inclined to "interpret any stylistic difference in terms of local imitation, or transmission of style, rather than of the actual vessels... If one considers that incised ware was a less common form of production and not so typical of the local tradition, it is plausible that its variability in petrographic terms can be attributed simply to a lack of standardization in production" (2012, 115).

Of the rest of the samples that were analyzed in 2012, only one other fell into Group 1. Three were consistent with Group 3, Monte Finistrelle, two with Group 5, Monte Maranfusa, and one each with Groups 2, and 4, both closer to Sant'Angelo Muxaro, and closer to the location of Morgantina. These results were checked by another researcher, Maury Morgenstein, who did initial sampling at Morgantina in



Figure 3.5: Carinated cup fragments, Morgantina Tomb 51, uninventoried (photo author).

2007, and he confirms that most of our samples were probably locally made. But, samples 5 and possibly 4 from Morgantina do appear to be related to Kolb and Speakman's EL-2 group and as well as a source sample from Vulcanelli de Macalube, in the territory of Agrigento. Another sample appears to be related to the Vulcanelli de Macalube sample, but not the EL-2 compositional group. Our sample 17 appears to be related to EL-5. Samples 1 and 11 had no known correlating sources. The remaining samples appear to be related to the major source samples that we identified as being important for Morgantina, in the immediate vicinity of the site. Morgenstein summarized that we have a mix of sources, some of which are west Sicilian, but many of which are not.

This is a much richer picture of local variation at Archaic Morgantina than the original categories of Greek, Siculan, and colonial pottery presented. We have some western Sicilian imports, but also a lot of pottery made in a style that is not normally considered dominant in our region, but nevertheless turns up locally, and shares some of its motifs with the matte-painted pottery. Since Princeton's day, it has become clear that Morgantina in the seventh and sixth c. was a center of production and also exchange, and its material culture especially in the sixth c. was quite mixed, or hybrid. The graywares had a particular role to play in this hybridity, which is both indigenous, among the various groups in Sicily, and incorporates vessel types

and some decorative elements from outside: from the Greeks. And we now know that some of the graywares are locally produced.

At a place like Morgantina we seem to have layered networks; some are networks that pre-exist the formation of colonial networks and tie into them. Introducing materials science, mapping clay sources and examining how different traditions of something as ubiquitous as pottery could co-exist on the same site, apparently made locally, opens up all kinds of possibilities to understand better what so intrigued Sjöqvist and Allen.

Conclusions

What of Princeton's initial goals, with which this paper began? It must be said that major finds of the type that Sjöqvist used to "sell" his expedition mostly eluded Princeton and excavators since. They have instead been recovered by illegal excavation and exported to museums and collectors overseas, and these important objects have thus been the objects of a serious and sustained effort at the recovery of cultural patrimony undreamed of in the 1950s (Dyson 2006, 273–281; Bell 2000). Morgantina has, however, provided a surprising number of early documented examples of Classical and Hellenistic Greek innovations, including the use of terracotta tubes in the construction of domed and barrel-vaulted spaces, an early tessellated mosaic, as well as the earliest surviving Roman *macellum* anywhere (Lucore 2013; Bell 2011; Spurza 2013).

Sjöqvist's early interest in the possibility of a better understanding of the particularities of a Sikel-Greek culture in the island has, however, come to fruition. The investigations and interests of Hugh Allen in the 1970s, and the involvement of non-Princeton scholars such as Östenberg at the start, and Lyons, Leighton, and the writer during the period of study and publication, certainly advanced this aspect of the original intent of the prime mover of the project. This has led to substantial contributions not only to our understanding of pre-Greek Sicily, but added to a very broad archaeological discourse on identity, ethnicity, local agency, colonialism and post-colonialism, gender, consumption, and more.

Morgantina needs what all excavations need: long term and proper storage, a digital archive, conservation of the site and ensuring its security, and the efforts of future generations to further contextualize the site, and build on the work of their predecessors. There is no end to the work that could be undertaken, and its potential, but the need for resources and commitment that plagued the first directors remain with us still.

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David B. Small

4 A Defective Master Narrative in Greek Archaeology

Abstract: I argue here that scholars of ancient Greece have used a defective master narrative in their approach to analyzing the importance of evolutionary changes from ostentation to reduced ostentation in community cemeteries. The narrative states that limitations in ostentation in ancient Greek communities can be traced to, and in turn affect the rise of, the concepts of citizen status, egalitarianism and, eventually, democracy. Turning to analogies in the historical and archaeological record of several different cultures, I show that the narrative is defective. It has prevented us from understanding what exactly the social role was of sumptuary legislation in the evolution of the ancient Greek past. This has not been understood especially with regard to its contextual importance in cities such as Athens. I further argue the force of the master narrative has led scholars to focus almost exclusively on parts of ancient cemeteries that contain monuments of reduced ostentation. That myopic view has hampered our attempts to recreate a more accurate view of what ancient Greek cemeteries mean in terms of social memory during these periods.

Introduction – My Argument

Rather than examine problems inherent within the archaeological contexts and the methods used by classical archaeologists, my concern lies with a significant internal problem in the interpretation of the Greek archaeological record. I am referring to the use of a defective master narrative currently used to explain social structure in ancient Greece.

The term master narrative or “metanarrative” was first coined by Jean-Francois Lyotard (1984) in reference to the advent of postmodernism. I do not wish to swim in postmodern waters, but a master narrative is an explanatory model that becomes the leading interpretation of various periods in history or their material cultures. Master narratives have organizing principles and lines of logic and, more often than not, they demonstrate an organized sense of outcome.

In the study of the Greek past, one of the most common and, I would hold, the most defective master narratives is that which several historians of ancient Greece employ. This master narrative explains the evolution of a great deal of Greek social structure as leading somehow to the eventual triumph of the demos, as witnessed in Classical Athens. Some of the most prominent ancient historians, such as Raaf-laub and Wallace (Raaf-laub, Ober, and Wallace 2007, 23–24) have accepted this master narrative to the extent that they incorrectly see the rise of demos power in early and remote cases such as that of eighth century B.C. Dreros on Crete, missing entirely the unique features of an archaic Cretan polis, which have little which would put them on an evolutionary ladder to Athenian demos power (Seelentag 2014).

There are, of course, master narratives in archaeology. They often strongly affect research, and some are actually helpful in organizing our thoughts and data. Two salient ones are embedded in accounts of the collapse of the southern Maya (Webster 2002), and the fall of the Roman Empire (Christie 2011). But as we look closely at a master narrative in ancient Greek history, not all embedded intellectual structures are beneficial. The one that I shall discuss here has, I think, prevented archaeologists from seeing issues surrounding ostentation in ancient Greek funerals and cemeteries clearly. This master narrative states that marked restriction in ostentation in social contexts equates to an egalitarian ideal, which in turn correlates with a rising sense of polis community and democracy (I am not treating the *ethne* here). Most readers will recognize that this is the narrative behind Morris' argument (e.g., Morris 2000, 109–312) for the evolution of a middling ideology in ancient Greece, a teleological framework leading to the appearance of democracy.

A major context to which this master narrative is frequently applied has been that of burial. In short, restraint in burial is often seen as correlated with an egalitarian ideology and the presence of a sense of citizenship. The major proponent of this master narrative has again been Ian Morris (1989; 1990; 1992; 2000), who has repeatedly outlined the application of this narrative to the Greek burial record, in his interpretations of the evolution of the Greek polis. It has been so pervasive an interpretation that it has now found its place in major popular overviews of ancient Greek society and archaeology (Osborne 1986, 83–84; Whitley 2001, 185–188, 363–375).

Perhaps the most prominent recently has been that of Mee (2011, 243–248). His treatment of one of the possible laws on burial ostentation in Archaic Athens bears mention here.

These sculpted grave markers [Archaic burial monuments] were obviously expensive and could only have been afforded by wealthy aristocrats who evidently used funerals as an opportunity for a show of strength. Consequently legislation was passed which imposed restrictions. Cicero (*De Legibus* 2.26.64) records: “On account of the size of the tombs which we see in the Kerameikos, it was decreed that no-one should make a tomb which required the labour of more than ten men over three days, and that no tomb should be decorated with plaster or have the so-called herms [presumably kouros and kore statues] set on it.” It is not clear when this law was introduced but there was certainly a change in the late sixth century when grave monuments became much simpler. This coincided with an increase in the number of inhumations and child graves, which suggests that the democratic reforms of Kleisthenes did alter practices.

Mee here is referring here to Cicero's oblique mention (*Leg.* 2.26. 64) of some sort of restriction, often referred to in Cicero's terminology as “post aliquanto” legislation (Kurtz and Boardman 1971, 90; Garland 1989, 6) placed on display in Athenian cemeteries. Many scholars date this putative event to a time after Solon, hence “post aliquanto,” perhaps close to the end of the sixth century B.C.

The master narrative to which these scholars are referring has seriously hindered our ability to understand the social structure of Greek communities in two important

ways. First, scholars seek internal explanations for restraint in cemetery ostentation and do not take advantage of the large corpus of cross-cultural work on sumptuary laws. As I will argue, these laws explain the ancient Greek cases better than explanations dependent upon the ancient Greek context alone and show that cemetery restraint is not coupled with rising egalitarianism and concepts of citizenship as now commonly held. Second, the force of the concept of equality and citizenship within the narrative has led scholars of ancient Greece to focus too closely on monuments which were reduced in ostentation, rather than taking a larger scope of the cemetery as a landscape of memory. A close analysis of the actual landscape of ancient Greek cemeteries seriously challenges the prevalent concept that restraint in burial ostentation signals citizenship equality. My focus will be primarily on Athens and its cemeteries, although there is ample evidence for cemetery and funeral restraint in other polities (see e.g., Garland 1989 and Small 1995).

The Master Narrative and Sumptuary Legislation

Let me turn to my first point and review some cases to show what I mean when I say that Greek archaeology suffers from an insufficient comprehension of the roles that sumptuary rules play in other cultures. For Athens there were two, possibly three times when funerals were affected by sumptuary legislation (see overview in Retief and Cilliers 2005). For two of these instances we have a moderate amount of historical information. The first was during Solon's archonship at the turn of the seventh to the sixth centuries B.C. The second is the fourth century case of the laws against funeral ostentation enacted by Demetrios of Phaleron (ca. 317 B.C.). The weakest documented and third period of possible sumptuary legislation was that referred to by Mee above. This is the probable case obliquely referred to by Cicero, which might have taken place at the turn of the sixth to the fifth century.

Our information on Solon's rules is problematic at best, and comes from various sources written after his lifetime. Two of these sources are Demosthenes and later Plutarch (Garland 1989). The restrictions they mention have been summarized by Sarah Pomeroy (1995, 112) as follows: the prothesis must be held indoors; the ekphora must be held before sunrise on the following day, with men walking in front; only women over the age of sixty or related to the dead within the degree of second cousin were allowed to participate; women must not wear more than three himatia (cloaks), nor can the dead be interred in more than three; food and drink brought in the procession must not be worth more than one obol; the offering basket must not be longer than one cubit; mourners must not go out at night except in a funeral cart with a light; laceration of the flesh, singing of prepared dirges or mourning anyone except the person whose funeral is being held is forbidden; and visiting tombs of non-relatives except at their funerals is forbidden.

As mentioned, the other period for which we have good evidence of sumptuary regulations, witnessed both in written and material evidence, comes from the time of Demetrios of Phaleron. A late fourth century orator and politician in Athens, Demetrios was known as an agent for the Macedonian ruler, Cassander, and was essentially governing Athens for the king. Our knowledge of what constituted real measures put forth by Demetrios is weak (O'Sullivan 2009; Stork, van Ophuijsen, and Dorandi 2000). He may well have had a general interest in controlling ostentation in ancient Athens. There is some evidence, however slight, that he essentially eliminated private support for the ever-growing choruses in dramatic presentation. Some scholars (Stork, Van Ophuijsen, and Dorandi 2000) also suggest that Demetrios worked to restrict extravagant spending in private celebrations through *gynaikomenoi*, or officials who oversaw family extravagance by means of the showy displays of women. However, the best-documented result of his legislation is the mortuary restraint in the Kerameikos cemetery. His famous rule that new tombstones were to be regulated and limited to either a *kioniskos* or a small tripod is documented and can be seen by the presence of these tomb markers in the Kerameikos even today.

Sumptuary Rules – Internal Explanations

Explanations for exactly why the Greeks promulgated such rules against ostentation in the funeral context have varied. But they revolve around internal explanations, and are decidedly bipolar, focusing either on the prevention of internal strife or the control of ritual pollution. Stevanović (2009) argues the Greek states brought measures against female lamentation at funerals, because such demonstration has a strong ability to affect the community and may affect the desire of its citizens to be brave and die for the polis. She also points to Solon's rule against speaking ill of the dead as an attempt to control blood feuds, one of which (the "Kylon affair" in 632 B.C.) had affected Athens shortly before his rule. She points primarily to the state's concern with ritual pollution because women attend funerals, as well as the desire of the community to limit the opportunity that funeral display might offer groups for exploitation for political purposes, and the inconveniences that funerals may entail.

Garland (1989) discusses not only the pollution inherent in the funeral, but he also claims that ostentation tended to promote divisiveness and factionalism between aristocratic kin groups (*gene*). He also mentions the ruinous expenditure of some funerals. Osborne (2007) also looks to issues of pollution, especially with respect to Solon's ordinances. He also argues that rules on female modesty were meant to protect women from assaults by men in public. In a general observation, Frisone claims that the purpose of funerary legislation is "...to display social prestige and rank in an elevated and significant manner, as far as possible, in accordance with the prevailing social values" (2011, 183). This is a sort of "catchall" conclusion, but it

does reveal an argument for placing restrictions upon the elite, taming such display by making it conform to the social values of the community. Frisone's argument fits in nicely with that of Morris (2009, 79). He argues for some sort of self-restraint in mortuary ostentation, as Greek communities were adopting a middling ideology that saw most citizens in the community as somewhat equal. He therefore classifies these restrained cemeteries as "citizen cemeteries" (cf. Patterson 2006), a point to which I will return in this essay. Miles (1984) focuses on ostentation in women's clothing within the funeral context and sees such rules as preventing social climbing, especially when the ostentation is in a sacred context. He is the only scholar to make use of a cross-cultural anthropological approach, but limits his interest to clothing.

Finally, one of the most interesting explanations for restraint in funeral ostentation is Whitley's. In his introduction to Greek archaeology (2001, 374–375) he seemed perplexed by Demetrios' rule change in the cemetery. He interprets these rules as a social experiment in philosophy, referring to the fact that Demetrios was a philosopher.

Demetrios was no democrat; some later authors call him a tyrant. His patrons were the new Hellenistic monarchs, Cassander in Macedon and Ptolemy in Egypt. But he was a philosopher, and, like many philosophers given political power, saw Athens as a kind of laboratory for the creation of the 'ideal state'. The fact that Athens, by this time, was no power to be reckoned with made his task that much easier. His promulgation in favour of the plain style of commemoration can therefore be seen as an extreme, philosophical expression of the polis ideology of isonomia, of the essential quality of all citizens."

Whitley's interpretation actually represents a strong adherence to the master narrative, even if his explanation for funerary restriction suggests a philosophical dimension. Because he sticks so closely to the master narrative, I use his observations to return to the introduction of this essay: that scholars have missed the fact that the meaning of these sumptuary laws can be elucidated by reference to their use in several different cultures. My point here is that emphasizing the philosophical predilections of Demetrios misses the essential nature of the restriction itself. Whitley's error here was picked up by Hall (2003, 295–296) who points out that the case better fits a standard explanation based upon sumptuary legislation, with Demetrios paralleling other tyrants in Greek history (Periandros of Corinth and Pittakos of Mytilene) who proposed laws limiting ostentation in funerals.

Sumptuary Legislation – Cross-cultural Analogues

Hall was on the right track, and employing some cross-cultural analogues bolsters his argument. When one looks at the occurrence and function of sumptuary regulations in an anthropological cross-cultural study, their most common function is to quell

instability among elites—with the opposing elite factions best described in terms of new money versus old money. Two examples can serve to illustrate this point. The first is sumptuary regulations that were put into effect in sixteenth century Japan (Shively 1964). They served the purpose of solidifying order in the upper social classes, which had been upset by newly wealthy merchants and townspeople, who had gained wealth, but sought to legitimate their higher financial status with claims to positions in the old elite hierarchy. Just as in Greece, laws were passed on various forms of display, especially women's clothing in religious contexts. A second clear example of sumptuary legislation comes from Tudor-period England (Belfanti and Giusberti 2000; Hooper 1915). Here too, while there might have been some additional reasons for such legislation, the laws were promulgated to reinforce the social hierarchy, which was being actively challenged by newly rich merchants in some of the major English cities. In the Greek context, as Hall (2000) has noted, sumptuary legislation is closely tied to the appearance of tyrants in Greek history. One of the fears of a tyrant is the danger of challenges to the social order he has set up, so the promotion of sumptuary rules makes perfect sense. The Archaic period, when many Greek tyrants were in power, was one of rapid social climbing. This was the era when poets such as Theognis (53–60) grumbled that those who were poor could become noble, and vice versa, in a single lifetime.

In order to understand how sumptuary legislation functioned in Greek funerals and cemeteries, we need to contextualize these examples within the larger Greek community. As I have argued elsewhere (Small 2009; 2011), Greek polities featured several contexts which provided locales for status display. Many of the people who would have been most active in this display would have been families who wanted to “move up the ladder:” that is, those who would have had the money to spend on such status-affirming outlays but as yet had no official recognition of elevated status. Again, this is the typical old money versus new money issue, and Veblen's ([1889] 1994) path-breaking observations are germane to any analysis of ancient Greek social dynamics.

Status claims in two of these contexts, theater liturgies and the funeral, were more disruptive than the rest. Choregic expenses often served as avenues for elaborate status display by people who were trying to use the expense for political leverage (Lyttkens 1997). In fact, Aristotle (*Pol* 1309a 16–20) strongly recommended that democracies should limit this liturgy for the sake of their own stability. If, as some scholars think, Demetrios perhaps was limiting extravagance here, it would fit in well with an attempt to stabilize the current social order in Athens. When we look at the use of sumptuary laws as they apply to funerals, we can also see that people in power like Demetrios or Solon were well aware of the power of elaborate funerals to disrupt community social structure. As Hayden noted, “funeral feasts are critical in securing political, social and economic advantage in traditional communities” (2009, 31; see also LeCount and Blitz 2010). Through funeral feasts, families could obtain allies in intercommunity warfare and internal stasis, create alliances for interregional trade, and protect themselves against situations within their own communities which

would prove potentially harmful to them in the future. The object is to bring powerful participants into funeral feasts and use different characteristics of the feasts to impress and facilitate the creation of effective alliances. As such these funerals can be characterized by elaborate killing of domesticated animals, the costly expenditure on feeding and housing a large number of people attending the funeral, an emphasis on elaborately costumed participants, singers, dancers, and the prolongation of these celebrations for a number of days.

The case of ancient Greece shows well that these Greek funerals met several of the requirements outlined by Hayden. We know from the figural decoration on Geometric funeral vases that the funeral in that period was elaborate, with elaborate biers, a host of mourners lamenting and beating their bodies, and images of funeral processions and possibly games which took place as part of the funeral itself. Prohibitions incorporated into Greek sumptuary rules applied directly to the issue of elaboration that would aid those hosting the funeral in obtaining political, social and economic advantages. There were prohibitions on the killing of large animals (oxen), prohibitions on elaborate funeral expense, prohibitions against large numbers of attendees, prohibitions on elaborate dress. We can even go further and list the elaboration of the prosthesis, that of the ekphora, prohibitions on the gathering of large groups of people at the cemetery, and temporal prohibitions on common days for funeral celebration after death (day 10 and day 30), which because they were delayed times for celebration would have allowed for a greater attendance of people from different communities. The comparative evidence makes it quite clear. Rather than controlling women, or pollution, these Greek rules were sumptuary rules aimed at limiting the use of funerals as contexts for the acquisition of resources that could be used to disrupt the prevailing social order.

As we have seen, some would argue that limits on funeral ostentation were being set by a rising sense of an egalitarian ethos within a developing citizen body, but the observations of Hayden are important. He noted that there was no real association between elaborate funeral feasting and cultural claims of egalitarianism, which consider such ostentatious displays socially unacceptable. Much of this is due to the loose interconnection between different social contexts in transegalitarian communities. The institutions of one context were often isolated to that context and did not affect others. As I have argued (Small 1997), the same was true of the Greek polis, within which different social contexts were often only loosely intertwined. The ideology of one did not seriously affect the ideology of others.

Thus ethnographic as well as historical research denies the causative association between limits on funeral ostentation and egalitarian ethics, as claimed by Morris. In a way this should not be that surprising. The use of the funeral context as a sensitive window into the large internal social structure of ancient Greek communities is probably misplaced. Morris' model of social structure (Morris 1992, 3–8) is not equipped to take account of the limits on the community-wide intercontextual operationalization of concepts such as egalitarianism. In using social models such as that of Alföldy

(1992, fig. 4.3) he shows an interest in social relationships, but in an abstract and non-contextual way. When we analyze the ancient Greek community through its institutional contexts, we see clearly that the internal structure of the Greek polis was extremely fluid, with little close association between its various internal contexts (Humphreys 1978, 242–275; Small 1997; 2009; 2011). From a dynamic perspective, then, the shift in Athens from a period of restraint in funeral ostentation to one where ostentation again flourished after 700 B.C. does not represent a group of elites fighting back against the limits on ostentation put forth by a rising egalitarian citizen group. It is rather the opening up of the funeral context, after it had been restrained, to shift the ability to advertise status to only “old money” elites. The newly opened context could again be used by rising elites for status aspiration.

Appreciating the Cemetery Landscape

This nescience on the part of scholars of ancient Greece when it comes to understanding the nature of sumptuary rules is the unfortunate result of the power of the master narrative in directing their attention too strongly to internal explanations. Another result is that ancient Greek scholars have failed to grasp the landscape characteristics of cemeteries, focusing only on a temporally limited set of burials, which fit their concepts of egalitarianism. Again, let us return to the analysis of Whitley (2001, 372–375). Although Whitley claims that the cemetery, after the regulations of Demetrios, was now an expression of *isonomia*—citizen equality—the landscape that it would have presented to the visitor suggests anything but that. Whitley has not seen the cemetery as a landscape with ancestors. The new small stones may make all those interned with them look the same, but they looked the same in a cemetery where the rich of the earlier generation and their families’ descendants still displayed their status by already erected tomb markers. This was in no way a level playing field.

Archaeologists of Greece have demonstrated a general lack of appreciation for the characteristics of a cemetery landscape. To discuss this issue further, I will look at what we know about the ideological dynamics of cemeteries, through my own work in Nisky Hill and in other cemeteries. I will then turn to the evidence from the Greek past and see how these dynamics would have been operating then. For this exercise I am using the term “tombscape” for a cemetery landscape. It is a term coined by Katherine Cook (2011, 5). She uses it to describe “...a crucial social-spatial construct in which citizens lived their everyday lives, and which affect the emerging and developed polis in ways that have not been fully investigated.” It is the way in which the cemetery as a tombscape (and a whole unit) is manipulated and experienced by people within their community which is my concern.

Memory in the Landscape of Nisky Hill

For three years (1989–1992) I conducted research in a large Victorian cemetery in Bethlehem, Pennsylvania, called Nisky Hill (Small 1995). The Nisky Hill cemetery was founded by the Moravian church and the earliest recorded burial is 1849. With 25 acres, the cemetery is still expanding in its interments with continued burial in new sections as well as empty plots in sections that are much older. What makes this cemetery useful as an ethnographic comparison to those in the Greek past is that it too has a large number of restrained burials. In 1968 the Board of Trustees of Nisky Hill Cemetery ruled that unless families wished to duplicate already existing burial markers within their own family plots, all new burials were to be marked with a ground-flush head stone.

An important observation we made in our study was that the older and more elaborate burial markers were being manipulated within what were obviously social strategies of status recognition by descendent families tied to those markers. The means most used for recognition was cleaning the stones. As in most American cemeteries families can purchase contracts to have family stones cleaned periodically. This is most noticeable on some of the large family stones of many of the elite families of the community, families that were associated with Bethlehem Steel, and large gifts to educational and charitable institutions. The upshot of this observation is that elite families still wanted to use the cemetery as a context for status display. Since these were families with monuments that were erected before 1968, they represent what we would call “old money” or established elite families. The restrictions on monument ostentation in Nisky Hill denied any “new money” elites the opportunity of using this context for status display. Although an exhaustive study was not made, there is some evidence that there was a contemporary increase in the number of ostentatious monuments by newly rich families in religious cemeteries in the Bethlehem area. If this were the case, it would show that new elites were simply shifting to other cemeteries to display their status.

The Study of Memory in Other Recent Cemeteries

There are numerous excellent studies of modern cemeteries and community memory. It would be impossible to discuss them all, so I will select some that represent the issues brought forth in most studies. For example, Katrina Simon (1996) has studied nineteenth-century graves in New Zealand. In her work she argues strongly that such a cemetery is an active “landscape of remembrance.” Even today the monuments themselves are items used in the active recreation of community memory—whether it is close to that of the nineteenth century, or shaped by the fact that several of the monuments have undergone mutilation, been obscured by tree growth, or are only

partially still visible. One of her observations is germane to our research into what cemeteries meant to their communities: for all cemeteries, the physical features of the cemetery are important, but it is the memory which is created by visitors to the cemetery which is more important to the way in which people look at their community and its past. I find Simon's analysis one of the clearest in its application to our own questions, but others are useful as well. Buettner (2006), Tarlow (2000), Wilde (2008) and Wright (2003; 2005), have explored similar issues with cemeteries from the nineteenth century or more recent past. Burial grounds from the more distant past also exhibit similar characteristics. For example, Charles and Buikstra (2002) proposed that the tombscapes of the Mississippian period in the Midwestern United States provided a context for the creation of a social memory through which agents changed an emphasis on ancestor worship into mortuary ritual.

Turning to Greek Cemeteries

In this section I shall apply the recognized dynamics of memory in cemeteries to the Greek past. I start with the Kerameikos after the rules of Demetrios because it might closely match what we studied in Nisky Hill and other cemeteries. We know that monuments erected prior to 314 B.C. were still standing after the restrictions. In fact, these monuments, dominated by large family *periboloi* or plots, had already taken the most visible positions in the cemetery, lining either side of the road leading into the city. The post-Demetrian monuments were located in areas away from the edge of the road. We also know that Athenians were still activating the power of these plots by continued interment in the *periboloi* after Demetrios (Small 1995, 160–163). Thus, rather than the Kerameikos displaying a concept of egalitarian citizenship after Demetrios, it was conveying the uneven status relationships between ancestors who were still signaling their prominent status, and those buried after 314 B.C. who could not.

It is necessary therefore for us to expand our observations beyond Athens in 314 B.C. and then ask the question, what did the tombscape of many cemeteries in ancient Greece look like, and how would people use monuments from different periods within the same cemetery in various social strategies. Here I propose that we first return to the Kerameikos to look at the tombscape in an even earlier period. This time would have been that within which Morris and others see a significant change in cemeteries, when non-ostentatious monuments or even monuments lacking a marker were being constructed.

In the Kerameikos in the later part of the eighth century B.C. we do have evidence which shows that there was significant change in mortuary practice. The burials of the Early Geometric and Middle Geometric I witnessed the use of large amphorae and kraters as grave markers. The depictions of elaborate funerals and possible funeral games on the markers were either tied to actual social practice, or to social aspira-

tion. As we turn into the latter phases of the Middle Geometric, the burial rite changed from cremation to inhumation. By Late Geometric II (ca. 735–700 B.C.), grave markers cease. This is the period that Morris would refer to as that of egalitarianism, when he sees a switch from formal burial restricted to elites to burial open to non-elites. This is the period for which he would say that Athens had a citizen-cemetery. The issue of exclusion and inclusion from burial and citizenship remains open to question, however (see Houby-Nielsen 1995 and Patterson 2006).

But this observation does not take into full view the fact that the Kerameikos was a tombscape with earlier burials from Late Geometric I (ca. 760–735 B.C.) still advertising themselves with elaborate decorated pots. The archaeological evidence indicates that they were not destroyed or removed (Knigge 1988). Continuing to advertise status, they would have been standing within the period of the construction of social memory in the Late Geometric period. Like the stones in Nisky Hill they would have advertised the prominence of their interred, which would have been heightened by comparison with less ostentatious graves. We can also add here that the period of not marking graves lasted a generation, which means that only a generation earlier people were engaged in grave ostentation through elaborate markers. Recent study (Tzortzopoulou-Gregory 2010) has shown that social memory within cemeteries by families can last over a century. Given that the ancient Greeks appear to have had strong memories within their own families, it is not hard to see how powerful the presence of these still-standing monuments was, and how they must have given meaning to the larger tombscape itself. As we saw with the fourth century, its meaning was probably acclaiming that the status advertised in the earlier periods had become the dominant status, and that families newly burying in the Kerameikos were locked out of using the Kerameikos for status play.

Morris argues (e.g. 2000, 287) that other communities such as Argos, Corinth, and Eretria were also evolving through similar transitional periods as Athens, and were therefore undergoing a social evolution to broader and more egalitarian citizenship as well. But a look at the cemeteries in these communities indicates that their situation was probably similar to that in Athens in the late seventh century. Pride of place goes to the West Cemetery at Eretria where there is excellent evidence for earlier geometric graves serving as loci for aspects of cult and commemoration during the periods of possible decline in burial elaboration. Crielaard (2007) points to evidence for elite tomb veneration of Geometric burials in the time of the “citizen cemetery.” For Argos, Hägg (1974, 154–156) has argued for some evidence for commemoration of pre-“citizen cemetery” burials. The archaeology of the tombs themselves also shows that in the time of the homogeneous citizen cemetery, earlier tombs were certainly visible and would have been part of the collective memory of the developing polis. The North Cemetery at Corinth (Shear 1930; Blegen, Palmer, and Young 1964, 13–87), which has also been cited as a locale for a homogeneous cemetery, has an archaeological record, which hints at possible earlier tombstones, and definitely indicates a tombscape with

social memory, both in the preservation of a peribolos, and in the fact that earlier tombs were respected in the placement of burials within the later cemetery.

These studies demonstrate well that we should not envision any section of a Greek cemetery that was non-ostentatious as standing alone in the cemetery. The older burials were still there and still part of the community memory. In fact I find even entertaining this idea rather surprising. The Greeks were often comparing themselves to the elevated status of their ancestors. We know that the Greeks in the Iron Age were connecting with earlier Mycenaean burials in what was apparently an attempt to tie themselves with theirs or fictive ancestors (Antonaccio 1995; Whitley 2002). This ancestral veneration can be coupled with the numerous lekythoi of the Classical era which display the respect paid to one's ancestors by continued commemoration at earlier tombs, and commemoration in the form of garlands, offerings of oil, etc. (Oakley 2005). So why does research into cemeteries in Archaic and Classical Greece not take these issues into account? I would venture that one of the answers would be the force of the strong master narrative which has led us to focus rather myopically on restrained burial practices, while excluding consideration of ancestors in the same cemeteries.

Conclusion

This essay may well be an outlier in this volume, but a view from the fringe does not make its issues unimportant. In its brevity I hope I have managed to highlight the essential problems Greek archaeologists have in analyzing these issues. Because of the strength of a master narrative that seeks to give meaning to any type of social restraint in the Greek past by locating it on an evolutionary trajectory towards eventual egalitarianism and a citizen polis, archaeologists of ancient Greece have an incorrect understanding of the importance of sumptuary legislation and restraint on mortuary monuments in ancient Greece. This is also not an indictment of those who are working with these issues, which can be tough, and elusive. But it is time that Greek archaeology begin to jettison the old master narrative and make full use of comparative anthropological and historical cases. The Greeks were not a unique people, even though we often think that so, because of the importance of their incipient democracies. But the importance of their institutions can only be understood, if we are willing to put the Greeks onto a larger cross-cultural plane. In so doing, we enrich our ability to understand the ancient Greeks.

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Tamar Hodos

5 Lycia and Classical Archaeology: The Changing Nature of Archaeology in Turkey

Abstract: Since Sir Charles Fellows' discovery nearly 200 years ago of ancient Xanthos and Patara, the region of Lycia, southwestern Turkey, has remained a major focus of archaeological investigation. Much, however, has centered on the mapping and excavation of the region's Greco-Roman city-states. In 2008, an international collaborative team led by UK and Turkish institutions commenced the Çaltılar Archaeological Project (ÇAP) to contextualize Lycia within a wider Mediterranean setting over a *longue durée* through an intensive study of Çaltılar *höyük*, an upland settlement site with contexts from the late fourth millennium to the middle of the first millennium B.C. The project emphasizes socio-cultural connectivity in the ancient Mediterranean, a broader framework that represents a new direction for periods associated with classical archaeology in Turkey, which have otherwise focused traditionally on the urban built environment of individual cities. The aims and methods of the project both respond to and anticipate changing perceptions of archaeology in Turkey, and the position of classical archaeology, in particular. The project's integrated research design has enabled us to answer socio-cultural questions for periods previously relatively inaccessible in Lycia, and as such creates new dimensions to the merits of classical archaeology both as a discipline and in practice.

Turkey and its Classical Archaeology

It is widely considered that Turkey possesses the most, and among the best, Greek and Roman ruins, including two of the Seven Wonders of the Ancient World—the Temple of Artemis at Ephesos, and the Mausoleum at Halicarnassos. Indeed, this heritage was the focus of early interest by eighteenth and nineteenth century European travelers to the eastern Mediterranean, who brought whole temples and tombs back to their nations. Most prominent, perhaps, are the Pergamon Altar in its dedicated museum in Berlin, and the Nereid Monument from Xanthos in the British Museum, London, although other works are scattered through the major international museums of the western world. Famously, the Ottoman sultans allowed the exportation to Europe of many such classical buildings and sculptures, and turned a blind eye to the digging of sites by local people, who sold the objects they found to dealers (see, most recently, papers in Bahrani, Çelik, and Eldem, eds, 2011).

Caring for its heritage has been a major concern for Turkey since the Republic was declared by Atatürk in 1922. Interest in promoting a Turkish past was central to Atatürk's aims of overturning associations with its immediate Ottoman past, in the eyes of the new nation and other countries (Özyürek 2006). He drew heavily on the ideologies of Mehmet Ziya Gökalp (1876–1924), the sociologist, political activist and poet who popularized the idea of a nationalist Turkish identity during the declining years of the Ottoman Empire. Gökalp's ideas, ultimately brought together in his 1923

The Principles of Turkism, called for a common language, religion, morality and aesthetic to produce a strong sense of national identity and national pride (Landau 1995). Atatürk recognized that any such identity was vital in order to counter European Orientalist and anti-Ottoman perspectives. Such change had to begin with the rehabilitation of the notion of “Turk” and the demonstration of Turks as the natural heirs of Anatolia, alongside the rejection of Ottoman practices. Thus, the fez was banned in 1925 to be replaced with western headgear; the Islamic calendar was abandoned in 1926 in favor of the Western clock and calendar; Arabic script was replaced with Latin in 1928, and from 1932 the language was reformed, with the replacement of all foreign words with so-called purely Turkish words, some of which were invented (Shaw 2004; Özyürek 2006; Goode 2007); in 1936 the Sun-Language Theory (*Güneş-Dil Teorisi*) was unveiled to proclaim Turkish as the mother of all languages (Aytürk 2004). Most significantly, Atatürk embarked upon a sweeping revision of the history of Turkey to claim ancestry with the earliest inhabitants of Anatolia. This process was known as the Turkish History Thesis (*Türk Tarih Tezi*) and purported to demonstrate Turkish ethnic continuity in Anatolia since prehistoric times (Erimtan 2008; Tanyeri-Erdemir 2006; Gül 2006 notes that it continues today under less racial yet nevertheless essentialist narratives, which she refers to as the Anatolian Civilizations Discourse). Intellectual thinkers of the time argued that the root of national power was a national identity founded in national history (e.g. Kandemir 1933, 3).

Turkey’s archaeological heritage had an important role to play in shaping and promoting this sense of shared ancestry and national pride (as, indeed, archaeology did elsewhere during this era, particularly in Europe: Kohl and Fawcett 1995; Díaz-Andreu and Champion 1996; Meskell 1998). Archaeology as a discipline of practice and study began to be formalized during the last decades of the Ottoman Empire, although more as a handmaiden to international relations: the first piece of legislation to deal specifically with antiquities was enacted in 1869 and outlined the division of finds between the excavation team (all of whom were foreign), landowner, and state. This began to change at the end of the nineteenth century, when Osman Hamdi Bey (1842–1910) was appointed director of antiquities in 1881. He introduced tight regulations governing excavations and antiquities, including state ownership of all antiquities, and established an archaeological museum in Istanbul (although the decision to establish an imperial museum had been passed in 1869, it was not founded until 1891) (Blake 1994). However, the production of archaeological knowledge at this time remained an elite affair and continued to be used by the Ottoman rulers in their political negotiations with Europeans. Thus, Osman Hamdi Bey’s efforts were often undermined by the Porte, which gave in to the foreign archaeologists and diplomats who complained directly about the enforcement of such regulations (Özdoğan 1998; Goode 2007).

Atatürk quickly realized that archaeological evidence would be necessary to provide support for his promotion of Turkey’s past as a source of pride for the new nation, and that it was essential to keep in Turkey the antiquities coveted by the Euro-

peans. As early as 1920, he established a department of antiquities, with Halil Ethem Bey (1861–1938), the brother of Osman Hamdi Bey, at the helm. The new department maintained strict control over excavations, with permits selectively allocated to assure the highest scholarly standard; a representative was assigned to oversee every excavation; and in some cases, excavated material was not allowed to be exported (Goode 2007, 25–29). Many of these policies remain in place today. The First Turkish Congress of History was held in July 1932 for nine days (every session of which Atatürk attended), for an audience of high school teachers with the goal of educating them about the Turkish History Thesis. Proponents of the Thesis recognized the need for corroborating evidence, and thus in 1933 a series of archaeological excavations commenced at explicitly prehistoric sites, as well as those of Hittite, Phrygian and other cultural origins, to demonstrate Turkey's relationship with these past mighty civilizations. A second Congress was held in 1937 with focus more on the empirical presentation of archaeological data than the theoretical nationalist theories that had prevailed at the previous Congress, and to an international audience of scholars (Atakuman 2008; Çiğ 1993; Shaw 2004; Tanyeri-Erdemir 2006).

This paved the way for archaeological research across a range of periods and cultures to create a rich and diverse understanding of Turkey's pre-Ottoman heritage that is maintained today. Sites pertaining to the Greek and Roman periods not already under excavation in the 1930s (such as Ephesos, the excavation of which began in 1863) were overlooked until the 1950s (Uçankuş 2000, 15), when interest in the Greco-Roman period was renewed. Sites pertaining to Islamic and Ottoman periods have become subject to systematic study even more recently (e.g. Baram and Carroll 2000; Milwright 2009; Peacock 2010). Today, Turkey permits over 250 archaeological field projects—including excavation and survey work—that span from prehistory to the Ottoman period through a highly regulated system that oversees the conduct of fieldwork in accordance with legal protocol to protect Turkey's heritage. (The numbers fluctuate each year slightly, although an overall, steady increase is noticeable over the past ten years. In 2011, there were 166 excavations and 104 surveys: <http://www.kulturvarliklari.gov.tr/belge/1-97365/2011-yili-kazi-ve-yuzey-arastirma-faaliyetleri.html>.) The system also encourages professional standards and promotes the rapid dissemination of results, primarily through an annual symposium, at which projects are expected to present their results from the previous season (see below).

Lycia's history of archaeological research illustrates these developments and exemplifies the current trajectory of scholarly emphasis and practice in Turkish archaeology. Initially, it was Lycia's rich classical heritage that was mined by Europeans, and its Greco-Roman periods remain a major focus of modern archaeological research. Increasingly, however, other periods are the focus of study as scholarship seeks to contextualize Lycia, and Turkey, within broader socio-cultural settings in antiquity. This article examines the history of archaeological work in Lycia, which begins in the eighteenth century, to the present day to illustrate the changing nature of Turkey's heritage focus. It examines the Çaltılar Archaeological Project, which

seeks to contextualize Lycia within a wider Mediterranean setting over a *longue durée*, as a case study, for the aims and methods of the project both respond to and anticipate changing perceptions of archaeology in Turkey, and the position of classical archaeology, in particular.

The Archaeology of and in Lycia

Interest in the history and archaeology of Lycia began at the turn of the eighteenth century and was led by Europeans. The English prelate Richard Pococke (1704–1765) visited the region in 1739–40 as part of a grand tour of Greece and the Near East, publishing an account of his travels in 1745 (Pococke 1745). The English classical scholar and antiquarian Dr. Richard Chandler (1738–1810), the artist and neoclassical architect James Stuart (1713–1788) and the painter William Edmund Pars (1742–1782) came in 1764 on behalf of England's Society of Dilettanti to record Lycia's ruins, search for and transcribe inscriptions, in which Europeans were beginning to become interested (Stuart 1769; Chandler 1775). In 1776, the Comte de Choiseul-Gouffier, the future French ambassador to the Ottoman Empire, accompanied the Marquis de Chabert on a voyage around the Aegean shores, which took in the Lycian coast, to chart a mathematically rigorous representation of the Mediterranean (Choiseul-Gouffier 1782). Others were soon to follow, or at least planned to: Lt.-Col. William Martin Leake (1777–1860), who was also a topographer, visited Telmessos, Antiphellos and the Kekova region in 1800 before being turned back by fever, while the diplomat William Richard Hamilton (1777–1859) had intended to come but never pursued the trip because of rumors of plague (Spratt and Forbes 1847). The Austrian orientalist Joseph von Hammer (1774–1856) visited not long after, however (von Hammer 1811).

In 1811, Captain Francis Beaufort (1774–1857), a hydrographer to the British Admiralty and captain of the frigate HMS *Frederiksteen*, commenced a survey of the Lycian coast to assess its hydrography and naval capabilities, and he could not help but notice and record the abundant and diverse ancient architectural remains he observed along the coast from Patara to Phaselis. He published the results of his trip in 1817. Beaufort was accompanied by the architect Charles R. Cockerell (1788–1863), who recorded the first Lycian inscription, at Telmessos, and which happened to be a bilingual, thus affording interpretational possibilities and linguistic interest (Spratt and Forbes 1847, xii; Fellows 1852, 412) (fig. 5.1).

In 1838, Mr. Charles Fellows (1799–1860), later to become Sir Charles, visited Lycia for the first time. His 1839 *Journal written during an excursion in Asia Minor*, which recalled his journey around Patara and Xanthos, included lavish descriptions of the temples, tombs and monuments, and was lithographed by Charles Hullmandel (1789–1850). These Lycian carved remains were regarded as the epitome of Greek artistic achievement, and their images convinced the British Museum to support a second



Figure 5.1: Map of Lycian sites mentioned in the text (drawing S. Grice).

expedition to retrieve these antiquities for the museum. Fellows returned in 1840, although the *firman* for removal was not secured, and he returned empty handed.

Unaware of Fellows' second visit, in 1840 and early 1841, a parallel expedition around the Lycian coast was undertaken by HMS Surveying Ship *Beacon*, under the captaincy of Thomas Graves (1802–1856) and the mastership of Richard Hoskyn (1811–1873). Graves, Hoskyn and the *Beacon* returned in October 1841, and the team explored the interior, including Oinoanda and Balboura. Aboard the ship on this expedition were Thomas Abel Brimage Spratt (1811–1888), who served as Lieutenant and assistant surveyor; Edward Forbes (1815–1854), a naturalist; and Edward Thomas Daniell (1804–1842), an artist and amateur enthusiast who had joined the expedition at Smyrna. Hoskyn published his account in 1842, while Spratt and Forbes published the results of their discoveries in 1847 (Hoskyn 1842; Spratt and Forbes 1847).

During the winter of 1841–42, Fellows returned with a substantial team to excavate, document and reconstruct the architectural and sculptural finds from Xanthos, including the Harpy Tomb, lion sculptures, and the Nereid Monument. In 1842, the Harpy Tomb frieze and lion sculptures were delivered to the British Museum. The sensation of their impact resulted in a renewed expedition to retrieve remaining pieces of the monuments now in the possession of the British Museum, as well as additional antiquities. By 1844, over one hundred additional cases of sculptures and casts arrived in Great Britain, and in 1848 the Xanthian Room was opened in the British Museum to critical acclaim (Hooek 2010, 245–252).

French, Austrian and Prussian interest in Lycia furthered at this time, as well. Félix Marie Charles Texier (1802–1871) was sent by the French government in 1836 to procure antiquities for the French state. Augustus Schönborn (1801–1857) from Posen discovered the frieze of the fourth century Heroon at Gölbaşı-Trysa in 1841, although it was not until 1881 that the frieze and lintel were removed, by Otto Benndorf (1838–1907), along with the nearby Dereimis-Aischylos sarcophagus, to the Kunsthistorisches Museum in Vienna. The Austrian epigraphist Eduard Hula (1862–1902) visited Xanthos in 1894 and made copies and squeezes of the inscriptions. These were not published until 1920 (Kalinka 1920), although a bilingual Greek-Latin inscription from Arykanda, discovered by Benndorf in 1893 and submitted to Hula then, was published immediately (Grosart 1893; Mommsen 1893).

More methodological interest in Lycia began during the middle of the twentieth century and mimics the pattern of archaeological interest notable elsewhere in Turkey: namely, that only by this time were Classical sites more regularly examined. Indeed, one might argue that sites surveyed and excavated in Lycia since this period have largely been Greco-Roman city-states. In 1941, the Turkish archaeologist Ekrem Akurgal (1911–2002) published a study of sixth century A.D. reliefs in Lycia (Akurgal 1941). In 1950, a French team under the direction of Pierre Demargne (1903–2000) began the excavation of Roman Xanthos (1951) and in 1962, the project expanded to include the nearby sanctuary site of Letoon. Excavations at Limyra commenced in 1969 under the German scholar Jürgen Borchhardt, who had previously excavated briefly at Myra between 1966 and 1968, and who in 1984 moved to the University of Vienna, whereby the project fell under Austrian auspices; between 2002 and 2006, the late Thomas Marksteiner served as director, and since 2007, it has been directed by Martin Seyer. The Turkish archaeologist Cevdet Bayburtluoğlu excavated at Arykanda from 1971 for forty years, and since 2011 the project director has been Macit Tekinalp. Excavations at Patara commenced in 1988 under the direction of the Turkish archaeologist Fahri Işık until 2009, when the project directorship transferred to Havva Işık, under whose auspices it continues today. An intensive survey around Kyaneai was conducted between 1989 and 2001 by the German scholar Frank Kolb. Excavations at Tlos begin in 2005 under Havva Işık, and in 2009 Taner Korkut took over the direction. Each of these projects has produced substantial reports and publications (see below). European scholarship no longer dominates the study of Lycia.

While most research in Lycia has focused on the coastal sites, additional work has been conducted in its upland regions, although largely for epigraphic purposes, and generally still pertaining to the Classical era. The interior cities that belonged to the Roman Lycian League were first explored by Spratt and Forbes in 1842, although it was not until 1882 that this area was subject to more focused study, when the German archaeologist Eugen Petersen (1836–1919) surveyed the epigraphic remains at Oinoanda (Petersen 1889; see also Robert 1971; Smith 1977). In 1884, fragments of a substantial philosophical Epicurean inscription by a then-unidentified Diogenes were discovered by the young French epigraphists Maurice Holleaux (1861–1932) and Pierre

Paris (1859–1931). In 1885, two more young French epigraphists, Georges Cousin (1860–1907) and Charles Diehl (1859–1944), continued the exploration of the site and discovered additional fragments of the inscription. Cousin returned in 1889 to seek further remains (Cousin 1892). In 1895, the Austrian epigraphists Rudolf Heberdey (1864–1936) and Ernst Kalinka (1865–1946) visited Oinoanda to recopy many of the inscriptions published by Cousin in 1892 and search (successfully) for additional pieces (Heberdey and Kalinka 1897). In 1968, the British epigraphist Martin Ferguson Smith commenced a series of regular seasons at Oinoanda to seek additional fragments of the Epicurean inscription. This study was complemented between 1974 and 1983 by Alan Hall and a team of British scholars, who began systematically to plan the site and record its architecture (Coulton 1998). Only a single season of excavation occurred, in 1997, under the direction of Smith and with the express aim of recovering additional fragments of what is now recognized as the longest ancient inscription. Between 2007 and 2012, further mapping work at the site was undertaken by Martin Bachmann of the Deutsches Archäologisches Institut, Istanbul.

Between 1988 and 1995, the British archaeologist Jim Coulton conducted a survey of the area around Balboura, Oinoanda's neighbor to the north, to contextualize the development of both Roman cities within a wider landscape setting (Coulton 1998; Coulton et al. 2012). The Balboura survey was one of the first intensive surveys of a broad landscape in Turkey (and part of a growing trend: the Pisidia Survey Project, for example, commenced in 1982 under the direction of Stephen Mitchell and continues today under Lutgarde Vandeput). One immediate result was to provide evidence for Lycia's long-term settlement history going back to the Chalcolithic period (at Çaltılar, which was examined by the Balboura team).

Nevertheless, it remains true that the vast majority of these projects have focused on the Graeco-Roman periods. Yet the famous Bronze Age shipwrecks of Uluburun and Gelidonya attest the region's Bronze Age antecedents (e.g. Pulak 1998; Bass et al. 1967), and there is a relatively rich literary tradition that refers to the inhabitants of southwestern Anatolia during the Bronze and Early Iron Ages.

Lycia may be mentioned as *Lukka* in the chronicle of the late fifteenth century Hittite king Tudhaliya II, who lists it among his West Anatolian enemies forming the Assuwa coalition (Mellink 1995, 34 with bibliography; see also Bryce 2005, 125); during the fourteenth century, the *Lukka* are characterized in the Amarna letters as commando-style sea-raiders of Cypriot and Egyptian coastal communities (*El-Amarna Letters* 37, 7–12); at the end of the thirteenth century, we learn from Egyptian texts pertaining to Ramesses II that soldiers from the *Lukka* lands fought alongside the Hittites against the Egyptians in the battle of Qadesh (c. 1274 B.C.; Bryce 2005, 235), but by the end of the thirteenth century, Hittite texts speak of Hittite campaigns against the *Lukka* lands (e.g. Tudhaliya IV and Suppiluliuma II; Hawkins 1995, 66–85; Bryce 2005, 304; 329). The *Lukka* are also mentioned as one of the peoples who invaded Egypt along with other so-called Sea Peoples at the very end of the thirteenth century B.C. (Bryce 2005, 336; 338). The relationship between Lycia and its Late Bronze Age

past is first assessed by Herodotus (*Histories* 1.173), who notes that the Lycians originated from Crete but called themselves Termilai when they settled in the region subsequently known as Lycia, which was so called after Lycos, who joined them from Athens. A multilingual stele from Xanthos—in Lycian and Greek—has the equivalent of *Lukia* of the Greek text as *Trmmis* in the Lycian; as Machteld Mellink has surmised, the Greek custom of calling the Classical Termilai as Lycians must have been due to the persistence of Bronze Age and Homeric usage, when Greeks began to hellenize the name *Lukka* into Greek *Lukioi* (Mellink 1995). Thus, by the time of Homer, these people are the *Lukioi*, or Lycians. In the Trojan War, the Lycians are named as one of the principle allies of the Trojans, led by Sarpedon and Glaukos. In the *Iliad*, the Lycians feature for their *aristeia*—a warrior’s prowess, excellence and virtue—exhibited in the death of their leader Sarpedon, while in the Glaukos episode, in which Glaukos and Diomedes exchange armor, this *xenia*, or ritualized friendship, bind Greek and Lycian families together, forcing them to refrain from combat against one another (*Il.* 6.150–211; 224–225). In Homer’s epic tale, Apollo is their god: not only does Glaukos pray to Apollo for strength (*Il.* 16.514–515) but it is Apollo who rescues and prepares Sarpedon’s body for return to and burial in Lycia (*Il.* 16.676–683; see also Bryce 1985; Mellink 1995). Furthermore, we are told that these Lycians speak Greek, although we know the Lycian language is related to Luwian, and so an element of mythical-historical license must be assumed.

But what was the extent of the territory discussed in these texts? The upland area of the modern region of Lycia became affiliated politically with coastal Lycia during the Roman period, when coastal and upland city-states united to form the Lycian League. Prior to this, during the first millennium B.C., the eastern upland zone may have been known as Milyas, and included the Elmalı plain, while the western zone perhaps was known as Kabalia, although the boundaries between such groups seem to have fluctuated over time (Coulton 2012). We know that during the Bronze Age, for example, the *Lukka* lands themselves at one point may have extended as far as Konya, judging by an inscription at Hattusa from the period of Suppiluliuma II (Hawkins 1995, 29; see also Bryce 1992). Ultimately, the long-term Hittite notion of the *Lukka* may simply pertain to territories of Luwian-speakers (see, for example, Waelkens 2000, 480).

Milyas and Kabalia, themselves, are thought to derive from the Hittite names of *Mira* and *Kuwaliya*, kingdoms of the Arzawan region, which extended from central-western towards southwestern Anatolia (Bryce 2005, 43, 73–74; see also Mayer and Garstang 1925, 30). The kingdoms were united under a single ruler during the twelfth year of the reign of Mursili II (1321–1295 B.C.), according to the Kupanta-Kurunta Treaty, and by the end of the thirteenth century and the reign of Tudhaliya IV (c. 1237–1209 B.C.), *Mira* had become one of the largest and powerful states in western Anatolia, incorporating *Kuwaliya* (Bryce 2005, 308). By this time, a new power-sharing arrangement was established here, with a local ruler holding direct authority over neighbouring vassal kingdoms, as attested by the Milawata Letter; the Karabel inscription,

located less than 20 miles to the east of modern Izmir at the Karabel mountain pass, refers to the kingdom of *Mira* under the leadership of Tarkasnawa, and its location may have marked *Mira*'s northern extent (Milawata Letter: Bryce 2005, 306–308 with bibliography; Karabel inscription: Hawkins 1998; 1999).

Herodotus distinguishes the Milyans, Kabalians and Lycians from one another (*Histories* 7.77 and 7.92), and it is clear that during his time, there were noticeable material differences between the coastal and upland regions, although distinctions between the Milyan and Kabalian zones themselves are much harder to determine; personal names nevertheless suggest that they were linguistically related (Coulton 1993). In fact, a broadly uniform material culture has been argued for during the Bronze Age stretching from Afyon, in central western Anatolia, down to Elmalı, a region that also has climatic coherence (Coulton 2012). Coulton speculates that during the second millennium the inhabitants of this large area were known as *Kuwaliyans*, but that only the northern part was regarded politically as *Kuwaliya*. New ceramic traditions that emerged during the early part of the Iron Age suggest socio-cultural changes, with a dividing line around Dinar; ceramic patterns suggest that those settlements north of Dinar looked more towards Phrygia, while those south of Dinar were oriented towards the southern highlands. Coulton offers that during this time, and in response to Phrygian pressure, some *Kuwaliyans* may have moved south into the area between Burdur and Gölhisar and down to the Seki basin, lending to the area their name, which became Hellenized as Kabalian. He hypothesizes that those who became known as the Milyans, and who would have previously covered the whole of the southern highlands, consolidated to the southeast of this zone and into the Elmalı plain.

Until very recently, only one project explicitly sought to understand these—or indeed any—periods before that of the Greco-Roman city states in this part of Turkey. This was the work by the Dutch-born, American-based scholar Machteld Mellink (1917–2006) during the 1960s in and around the Elmalı upland plateau. Mellink's fieldwork provided the first evidence of Neolithic, Chalcolithic and Early Bronze Age occupation of this region, as well as the identification of several Iron Age tombs (Eslick 1992; 2009; Mellink 1998). Other even broader extensive surveys, such as those conducted by Hood, Mellaart, and French, although not specifically devoted to the modern region now called Lycia, did nevertheless incorporate prehistoric remains from this territory (Mellaart 1954; material collected by David French is held in the British Institute at Ankara pottery collection).

The upland region of modern Lycia has continued to be fruitful for achieving a different understanding beyond the Greco-Roman urban centers and public buildings that first attracted antiquarians to the region almost 200 years ago, although it nevertheless remains largely underexplored. In 1993, the Turkish archaeologist İlknur Özgen began formal examination of the site of Hacımusalar, the largest *höyük* (mound) in the Elmalı plain. Inscriptions indicating that the site was Classical Choma have been known since the 1960s, and excavations have focused on the later periods

of occupation. Nevertheless, soundings at the site have revealed evidence of occupation as early as the Neolithic period, and include Bronze and Iron Age evidence, although to date these lack stratified contexts (Özgen, pers. comm.).

Finally, in 2008, an international team of European and Turkish archaeologists under the direction of Dr. N. Momigliano (University of Bristol) commenced the Çaltular Archaeological Project in the Seki basin with the explicit aim of focusing on the pre-Classical periods of occupation of the Lycian upland zone (see below). This is significant, for, as is clear above, virtually all research in Lycia has focused on periods associated with its Greco-Roman history, although in 2010, early Chalcolithic (specifically Hacilar I: 5800–5700 B.C.) remains were salvaged from Girmeler Cave, in the vicinity of Tlos (Becks 2011). This represents the earliest archaeological evidence for the lower Xanthos zone. Other evidence pertaining to the Bronze and Early Iron Ages in both lower and upper Lycia is sporadic and generally unstratified (for places and bibliography, see Momigliano et al. 2011, 64; Momigliano and Aksoy forthcoming). One reason why earlier periods have been difficult to examine is because walls of an archaeological nature are not supposed to be removed. Given that most sites in Lycia that have been subject to archaeological examination are Greco-Roman city-states, earlier settlement contexts at such sites will, therefore, be challenging to examine, since the Greco-Roman periods are characterized by massive stone structures with deep foundations, especially in their public spaces; indication of earlier occupation at such sites is therefore usually only gained from soundings not impeded by substantial walling.

The Practicalities of Fieldwork in Turkey

Fieldwork in Turkey is highly regulated. Every fieldwork project, whether involving excavation or survey, and whether foreign-led or Turkish-led, requires a permit that is granted by the General Directorate for Monuments and Museums, TC Ministry of Culture and Tourism. Permit applications must be submitted to the authorities by December 31 of the calendar year before the work is due to commence. The application must explain precisely the work to be conducted and list each team member. All excavation projects must also offer a ten-year plan of activity and outline funding resources as part of the initial application for a permit, a timeframe of work that recalls the days of the Big Dig paradigm of classical archaeology (Dyson 1993; 2006), although one that is no longer fiscally realistic. While in the past, foreign teams may have been subject to tighter regulation than Turkish-led projects, today the regulations apply equally to all fieldwork teams.

During the field season, a representative of the Ministry of Culture and Tourism (a *temsilci*), usually a curatorial staff member from one of the over 100 museums across the country, accompanies the project for the duration of the season; the same person

may not return in this role to the project for three years. These *temsilciler* oversee all aspects of the work conducted by the field team to ensure that it is done in accordance with professional responsibility as well as within the law. They have the authority to close a project down at any time during the field season if they are unhappy with the conduct of work or fiscal matters pertaining to the season.

In recent years, the government has increasingly required projects to take responsibility for site protection, the preservation of collected material, and site sustainability. More specifically, managing the protection of a site under excavation, especially to prevent looting and other illicit activities, is the responsibility of the project director. In practice, this means that part of a project's budget pays for at least one site guard, who is employed throughout the year. In the late 1990s, the authorities passed a requirement that all excavation projects provide separate accommodation and long-term storage facilities for collected material within three years of commencing excavation, although any item classified as a special find must still be deposited in the local museum. This usually means that projects now construct such facilities, which must be distinct from one another, for the authorities will not permit a space to be used for accommodation during the field season and storage during the inactive periods.

More recent developments have been increasingly directed at the management and research avenues of field projects. From 2010, all foreign-run excavation projects were required to have a Turkish assistant director, to be active for a minimum of four months per year (with a two-month minimum of field work, and additional time for related research, museum studies, restoration, etc.), and to provide an annual budget for approval in advance of the commencement of each season's activities (Atakuman 2010, 123). From 2012, scientific samples could no longer be exported from the country for analysis if the relevant equipment and expertise were available in Turkey. In 2012, it was also decided that surveys could cover at most two provinces and could not be conducted during July and August. Foreign scholars were also required to publish their results in Turkish. From 2013, survey projects were no longer allowed to pick up material, while foreign excavation director candidates were required to have their status, which had to be at least Associate Professor (or equivalent), accredited by the Turkish Council of Higher Education (Yükseköğretim Kurulu, or YÖK). These regulations are cumulative and are incorporated into the latest version (<http://teftis.kultur-turizm.gov.tr/TR,50815/kultur-ve-tabi-at-varliklari-yla-ilgili-yapilacak-yuzey-a-.html>).

These requirements and changing goalposts, although discouraging, have not been insurmountable to conducting archaeological research in Turkey, and fieldwork projects, both foreign and Turkish, continue to thrive. This is most evident in the number of presentations given at the annual Symposium, which is, in fact, a series of symposia—one for survey, one for archaeology, one for archaeometry, and one for museum studies, which are held together at the end of May each year, at which projects present their research from the previous season. In 2011 and 2012, nearly a third of fieldwork projects were led by foreign teams, although this percent-

age is gradually decreasing toward one quarter. Excluding rescue fieldwork, in 2011, there were 43 foreign-led excavations and 123 Turkish; and 21 foreign-led surveys and 83 Turkish (<http://www.kulturvarliklari.gov.tr/belge/1-97365/2011-yili-kazi-ve-yuzey-arastirma-faaliyetleri.html>); in 2012, there were 39 foreign-led excavations and 116 Turkish; and 18 foreign-led surveys and 84 Turkish (<http://www.kulturvarliklari.gov.tr/TR,50150/2012-yili-kazi-ve-yuzey-arastirma-faaliyetleri.html>).

Nevertheless, the level of intervention by the government in the management of Turkey's vast heritage has reached the consciousness of the national press. Discussions appear regularly about the degree to which the authorities are interfering with the running of projects, and the politicization of archaeological fieldwork. A series of articles in various (government opposition) newspapers reported during 2011 that the excavation permits at Xanthos and Letoon had been removed from the French team that had been excavating for nearly 50 years and given to young Turkish archaeologists; the Turkish authorities claimed in part that the French were not publishing sufficiently substantial results to warrant the continuation of the permit, and that insufficient amounts of excavation and conservation were being conducted; some Turkish archaeologists have questioned the appropriateness of such action (Eğrikavuk 2011; Finkel 2011; Güsten 2011). Reported difficulties for foreigners obtaining *new* fieldwork permits in 2011 coincided with a number of calls the same year by the Turkish government for the return of various artifacts from major European museums (Allsop 2011; Edgers 2011; Güsten 2011; a number of Turkish-led projects also were not granted *new* permits in 2011, despite substantial funding and international recognition of the importance of the projects and the quality of the teams and project directors; most continuity permits were granted). It should be noted that national elections were also held on June 12, 2011, for which the incumbent party, the AK party, ran a nationalistic campaign. Similar stories have continued to circulate (Stonington 2013).

Part of the tension between academics and the government has arisen because of a perceived lack of coordination between the national government, regional and local administrations, and various stakeholders in Turkey's approach to tourism development (Tosun 2001). Tosun notes that the centralization of public administration functions has concentrated power in too few hands, and calls for local government to be empowered politically, legally and financially, although with an element of caution (Tosun 2001, 300; it should be noted that tension between national and local authorities has been a characteristic of Turkey's tourism development industry with regard to its archaeological heritage for decades: see Morrison and Selman 1991 for a study of Patara).

Mehmet Özdoğan, professor emeritus of archaeology at Istanbul University, has lamented the interference of political and personal agendas in the granting and renewing of research permits, and the politicization of the practice of archaeology in Turkey in recent years (Özdoğan 2006). In particular, the government has increasingly pressured projects to support and finance expanding tourism through site development (Hodder 1998 discusses this balance at Çatalhöyük; museums are also

under increasing pressure to balance the maintenance of collections and the need for market-focused impact: Yurtseven 2006). It has been observed that the practice of archaeology can never be free from politics, for any site potentially provides material for contemporary national mythologies, which are politically charged. This is especially relevant with regard to state (and even corporate) intervention (or manipulation) for public relations benefits. In such situations, often heritage activity becomes reduced to touristic consumption and prestige signaling in international diplomacy (Hamilakis 1999, 72–73; Atakuman 2010, 109; 124–126). This situation in Turkey has been described as having reached “fever pitch” (Finkel 2011; Neel 2011).

The Çaltılar Archaeological Project

New field projects in Turkey that seek to broaden our understanding of the past are commencing nevertheless. The Çaltılar Archaeological Project is one such example. It was conceived to contextualize this corner of Turkey within a wider Mediterranean setting over a *longue durée* through an intensive study of Çaltılar *höyük*, an upland settlement site with contexts from the late fourth millennium to the middle of the first millennium B.C. (Momigliano et al. 2011). Intellectually, the project engages with developing theoretical emphasis on socio-cultural connectivity in the ancient Mediterranean (e.g. Horden and Purcell 2001). It was also explicitly designed to shed light on the periods prior to the Greco-Roman in order to understand the material, social and cultural backgrounds to the development of those city-states, and to provide material evidence to complement the literary references to Bronze Age inhabitants of the region.

The project has been a collaboration between Bristol and Liverpool Universities in the United Kingdom and Uludağ Üniversitesi in Bursa, Turkey. The Principal Investigator (and permit holder) through 2012 was Dr. N. Momigliano, who co-directed the project alongside Dr. B. Aksoy (Uludağ Üniversitesi), Dr. A. Greaves (Liverpool University), and this author (Bristol University). The project has been facilitated by the British Institute at Ankara, which oversees the submission of the annual permit application to the General Directorate. The British Academy, the Institute for Aegean Prehistory, Three Counties Ancient History Society, Richard Bradford McConnell Trust, Seven Pillars of Wisdom Trust, our respective universities, and several private donors have supported the project financially, and Likya Şarapları kindly provided sponsorship in kind for fundraising purposes.

Although foreign survey projects are not required to have a Turkish co-director, we designed the project from the beginning—since our initial application in 2007 for permission to commence survey work in 2008—to be a collaboration between Turkish and foreign archaeologists. We have also actively sought close relations with our local hosts, in particular through regular outreach activities, which include an annual

public presentation of our finds and results; an opportunity for the children in the village to participate in timed total collection survey using a mock grid and modern broken pottery scattered throughout; the chance to participate in artifact reconstruction using the modern pottery collected in the mock survey; and a series of small-group interviews to gather information about the villagers' attitudes to their local heritage and the impact of the project's activities on those attitudes, particularly in terms of the history of the village itself, long-term chronologies, and broader heritage issues. One result is that many are interested in the potential for economic expansion deriving from tourism and improved infrastructure that the development of an archaeological site will necessitate.

With permission of the *vali* of Muğla province, the director of the Fethiye Museum, and the *mukhtar* of the village, we commenced restoration of the disused school buildings in the village to serve as a place of storage for our material and a research space for the project during the field seasons, and to provide a cultural heritage center for the community. In 2011–2012, through the collaboration of Dr. Greaves, the Project benefitted from a successful European Union grant by the Fethiye Museum and Liverpool University to finance the construction and development of the cultural center. These activities complement the aims and intentions behind some of the government's recent regulations for excavations.

The Setting of Çaltılar

The ancient site of Çaltılar is located in the Seki plateau, which is the first upland reached from the coast at Fethiye and has an altitude of 1,250 meters above sea level. This and its neighboring plateaus are nestled between high mountains that lead to the Turkish lake district province of Burdur. Although the summers are hot, the air is dry, rather than humid. For this reason, the village of Çaltılar today is a typical *yayla* settlement. *Yayla* has been defined as “a place to go for a definite period during the summer for: grazing of animals, conducting agricultural practices, supplying livelihood or even rest, which lies outside of the subsistence boundaries of a village, is usually joint property of a village, and although far away, is wholly or partially tied to that area with socio-economic connections, or a secondary area added to a village's actual subsistence area” (Tunçdilek 1974, 63). In short, a social and practical symbiosis exists between a village and its *yayla* counterpart.

This symbiosis can be seen today in Lycia between Antalya and Fethiye, the major towns along the coast, and the upland pasture zone at the top of the Xanthos river valley system. Many of the summer residents of Çaltılar live in Antalya or Fethiye during the winters, retreating to the *yayla* to avoid the coastal summer heat, humidity and tourists. Settlement names in both the coastal and *yayla* regions reflect the residential relationship. For example, Patlangıç, a district in Fethiye, has the corresponding Yaylapatlangıç, Esenköy in the Fethiye coastal plain now has an eponymous *yayla*

counterpart (although this is a recent renaming, for the upland village was previously known as Dont; the change may be regarded as the continuation of the Turkification of place names); but most tellingly is Kınık, the modern name for Xanthos village, for the first settlement one reaches in the Seki plateau from the coast is also called Kınık. Çaltılar itself has its lowland equivalent at Çaltıözü in the Fethiye district of the Xanthos valley. A pastoral origin of the *yayla*-coastal symbiosis may be seen in village names such as Çobanlar (“shepherds”) near the coast, and Çobanisa in the *yayla*.

Today, the village sits alongside the D350, which is the main road between Fethiye and Antalya across the mountains (fig. 5.2). This road has been a major transit route between the coast and the interior of the country for centuries. An Ottoman bridge near the base of Oinoanda reflects one relatively modern crossing point over the river, and a Roman inscription indicates that this was the crossing during the first century A.D., as well (Milner 1998). Further north, closer to Söğüt, is a Hellenistic watchtower. Finally, the recovery from the ancient settlement at Çaltılar of an obsidian blade originating from Nenezi Dağ in southern Cappadocia, c. 460 kilometers away, is likely to be of Bronze Age date, and its working is reminiscent of Aegean techniques (Momigliano et al. 2011, 109; Carter 2009), thus suggesting that this *yayla* zone served as a conduit, as well as a consumer, between the interior zones of Anatolia and the Aegean for a considerable time.

The ancient settlement mound (*höyük*) is situated just to the south of the modern village (the origins of the modern village date to the 1920s, when it and three other



Figure 5.2: Çaltılar in its landscape (photo Çaltılar Archaeological Project [ÇAP]).

districts on a nearby hill two and a half kilometers away, and now abandoned, were founded). The mound itself covers an area of about 30,000 square meters. The area immediately around the site is very fertile and is used for a diverse range of agricultural produce including plum, apple, tomato, cucumber, corn, chickpea, and wheat. The lush and fertile region may also be referred to indirectly in ancient literary sources. Homer tells us that Sarpedon and Glaukos owned fields and vineyards in the Xanthos valley and that this contributed to the source of their wealth (*Il.* 12.310–314); the assumed relationship between this *yayla* region and the Xanthos valley encourages us to muse that these lands up here may have contributed to the agrarian wealth of the Lycian heroes (although the region itself was not necessarily part of ancient Lycia politically until Roman times, and, as noted above, may have been part of Kabalia: Coulton 1998, 226).

It is commonly assumed that transhumance was practiced in antiquity much as it was during the Ottoman period, when western scholars first began to travel to Turkey and marvel at—and plunder—its ruins. While it is doubtful that ancient and Ottoman transhumance practices were the same, many do believe that a form of transhumance between the coast and upland did take place in antiquity. The presence of Lycian-style tombs from the fifth century B.C. in the Kabalian and Milyas regions imply the movement of people and their burial practices (Coulton 1993, 82). The multi-lingual fourth century B.C. Inscribed Pillar from Xanthos includes Greek, Lycian, Milyan and Solymian (Robinson 1999, 367–368), suggesting that readers and speakers of all these languages were regularly circulating between the coast and upland. This idea of a fluid movement between lowland and highland is further reinforced by a mid-second century B.C. inscription from Xanthos that establishes the border between Xanthos and Termessos Minor, next to Oinoanda; the text explicitly establishes rights of transit and the use of highland territory for pasture and wood collection by the Oinoanda Termessians, although the mountain itself, Mt. Masa, is agreed to belong to the lower-lying Tlos (Rousset 2010). The necessity of this resolution inscription indicates a significant, perhaps long-standing, conflict arising from the encroachment of pastoralists from one city onto the territory of the other.

Çaltılar was first recorded in 1988 as part of Coulton's Balboura Survey. Coulton's work determined that the site did not have any Greco-Roman overlay and that its occupation ceased some time during the middle of the first millennium B.C. His team was also able to identify Early Bronze Age evidence, indicating the longevity of the site, but nothing earlier and nothing later until the Iron Age (French and Coulton 2012, 44). In 1990, the site and its environs were declared a protected archaeological area. Between 1990 and 2008, the only archaeological activity at the site was the occasional collection of surface finds by staff members of the Fethiye Museum, sometimes with the project co-directors during preliminary reconnaissance visits to the site in anticipation of commencing fieldwork.

Fieldwork Methodologies

The project has included a number of studies to situate the ancient site within wider social and geographic contexts during its periods of occupation, as well as to reconcile the presence of an ancient site with the needs, pressures and aspirations of not only a modern community, but also of a country that is taking a prominent position in international relations, a role that brings about scrutiny of practices by national and international bodies. The methodologies and results of the main surveys conducted at the site between 2008 and 2010 have been published in detail in *Anatolian Studies* 61 (Momigliano et al. 2011), and readers are warmly recommended to consult this article for more extensive discussion. The following is a brief summary of our results and their contextualization with regard to developments in Turkish archaeology.

Archaeological Fieldwork

“Survey” is the preferable first step any new archaeological project in Turkey should conduct. A permit is unlikely to be issued for excavation unless “the new applicant has carried out a survey in the intended excavation area in advance and completed the survey to a certain stage” (according to the directive issued for 2012). The nature of the survey conducted is dependent entirely upon the individual project, however, and may be a type of extensive survey, or may include any number of kinds of intensive surveys, each of which may incorporate geophysical, topographic and planning work. Regardless, the exact nature of the work to be conducted must be detailed in the permit application. Since Çaltılar is a mound-type site, as well as because so very little is known of pre-Classical Lycia, we decided that the best method to inform us of the nature of the settlement within its regional setting was to conduct a series of different intensive surveys on the site itself over several seasons.

We began our archaeological fieldwork in 2008 with an assessment of the shape and extent of the mound primarily through a topographic survey using a Sokkia SET4E total station. Some 3,200 individual measurements were taken and entered into a GIS package to create a digital elevation map of the site. This survey revealed a series of cultivation terraces over the surface of the mound. In addition, a rapid reconnaissance survey with no collection of material was conducted in the fields immediately adjacent to the mound. Judging by the nature and quantity of visible material in these areas, we observed a sudden drop-off in material to the east and west of the visible mound edges. To the north and south, however, the fields were rich in pottery, and were included in the subsequent intensive archaeological survey that involved artifact collection. Finally, aerial photographs were commissioned from a commercial air photographic service, which used a tethered helium balloon and remote-controlled digital camera to produce a systematic series of oblique, vertical and panoramic views of the site and its environs.

The most time-consuming survey was the intensive collection survey, in which a grid system was established over the site, followed by a systematic total collection of all visible artifacts from a series of five by five meter squares (fig. 5.3). Each square was walked by two people. They moved *boustrophedon* through a square in both north-south and east-west directions, and systematically covered ground walked by the other to ensure nothing was missed. A third person kept time and the paperwork. The walkers were trained to common perceptions of visibility, and the walking of each square was timed (the average time taken for each square was eight minutes). In 2008, 413 squares were covered within a fifty by 150 meter transect across the north-south axis of the site and limited extensions to the north, east and south. In 2009, an additional 715 squares were walked, which covered the extent of the mound to the east and west.

The volume of material from any given square was largely determined by recent post-deposition activities, as suggested by a secondary study conducted in 2009, in which two ten by ten meter areas walked in 2008 were re-walked, and individual finds were plotted using a total station. One area had been subject to plowing, and the other not but had evidence of extensive mole activity (which is common at the site). The number of artifacts in each was similar to the quantity collected from each the previous year, and their respective distribution accorded with the method by which



Figure 5.3: Intensive collection survey (photo Çaltılar Archaeological Project [ÇAP]).

the finds had been brought to the surface: sherds were clustered in the area with considerable rodent activity, whereas they were more aligned with plough tracks in the area that had been subject to cultivation.

From these surveys, we are able to understand certain features of the site itself. The geophysical and collection surveys suggest that the extent of the *höyük* itself largely corresponds to the extent of occupation, with the exception of terraces in the north and south, from which a considerable quantity of material of all periods was recovered; alluvium may mask the eastern and western extents of the ancient settlement during its history of occupation. Our post-excavation study of this material did reveal one pattern with regard to the northern extent. Much of the Iron Age material recovered from these lower levels appeared very worn from water and erosion, in clear contrast with Chalcolithic and Early Bronze Age sherds from the same contexts. This suggests that the later material had been exposed for some time, perhaps washing down from upper levels, and implies that occupation in the Iron Age may have been less extensive, and perhaps limited to the upper levels of the mound itself, than in earlier periods, which clearly extended further to the north.

We also conducted successful magnetometer and electrical resistance tomography surveys to detect sub-surface features. For the former, a fluxgate gradiometer was used across twenty by twenty meter squares, from which readings were taken every meter, to assess the differential compaction in magnetic fields. The same north-south transect covered in the 2008 intensive survey was followed in the magnetometer survey, also conducted in 2008, as well as the northeast corner of the mound and the north terrace, for a total area of 13,600 square meters. More extensive coverage was not possible because steep ground, thickets, walls, and an electricity pylon in the northwest corner of the top of mound adversely affected the safe and accurate use of the equipment otherwise. Evidence of a series of east-west oriented farming terraces across the south and central areas of top of the mound was clear in the results of this survey; archaeological indications were apparent in the northeastern area of the mound, where a rectangular feature of approximately ten by twenty meters in a northeast/southwest orientation was identified (fig. 5.4).

For the latter, a Campus system was used to generate vertical profiles through the soil to a depth of approximately four meters to provide information on sub-surface stratigraphy. This method is effective in outlining the depth particularly to which stone features might lay, given the resistance of stone to the electrical pulses used in this system. Thus, a series was taken of twenty-five long east-west profiles at ten-meter intervals from north to south to corroborate the limits of the site noted in our other surveys. An additional series of eighteen profiles was taken east-west at ten-meter intervals moving south along the central axis of the mound. Few features were firmly identifiable, most likely because the archaeology lies further underground as a result of plough soil accumulation. Finally, an intensive north-south sequence of profiles was taken at one-meter intervals in the area of the rectangular feature noted in the magnetometer results. In the tomography survey, the feature was visible clearly

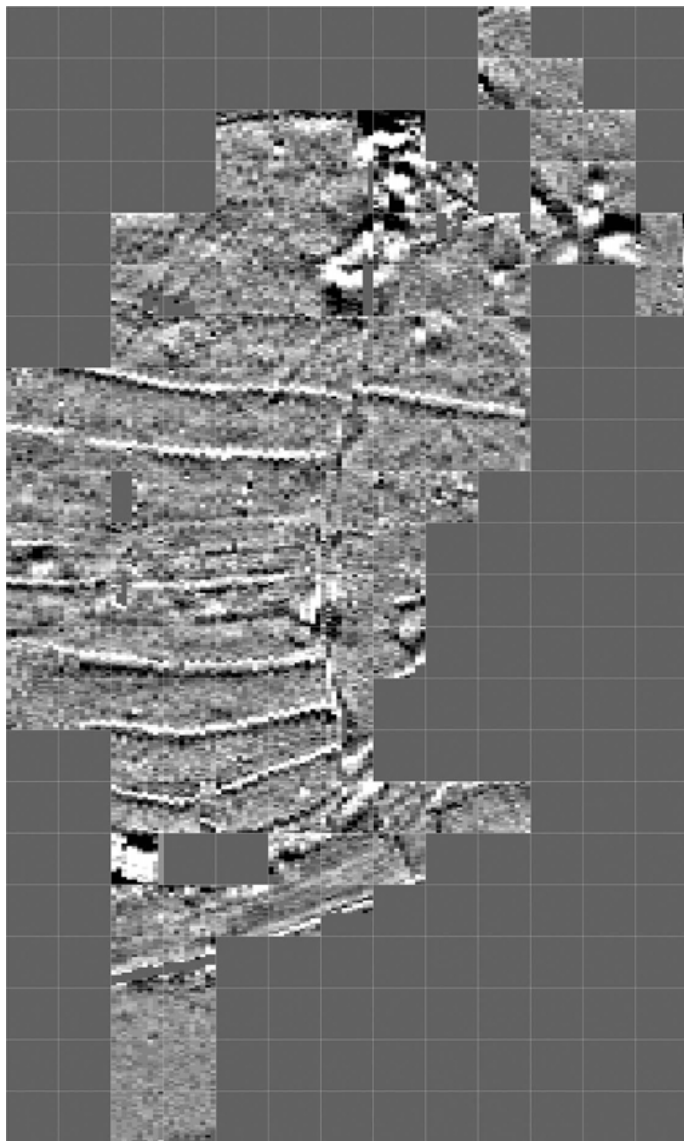


Figure 5.4: Geophysical results (photo Çaltılar Archaeological Project [ÇAP]).

and consistently from the current ground surface to a depth of two and a half meters. This suggests that it is a rectangular building with stone walls extant to a height of two and a half meters, the top of which lie just under the current mound surface (fig. 5.5).

We also conducted several other studies pertaining to the wider social and geographic area. One is a study of the *spolia* found in the modern village (Williams 2010). Many of these are Roman in date and are usually column drums, capitals, and other

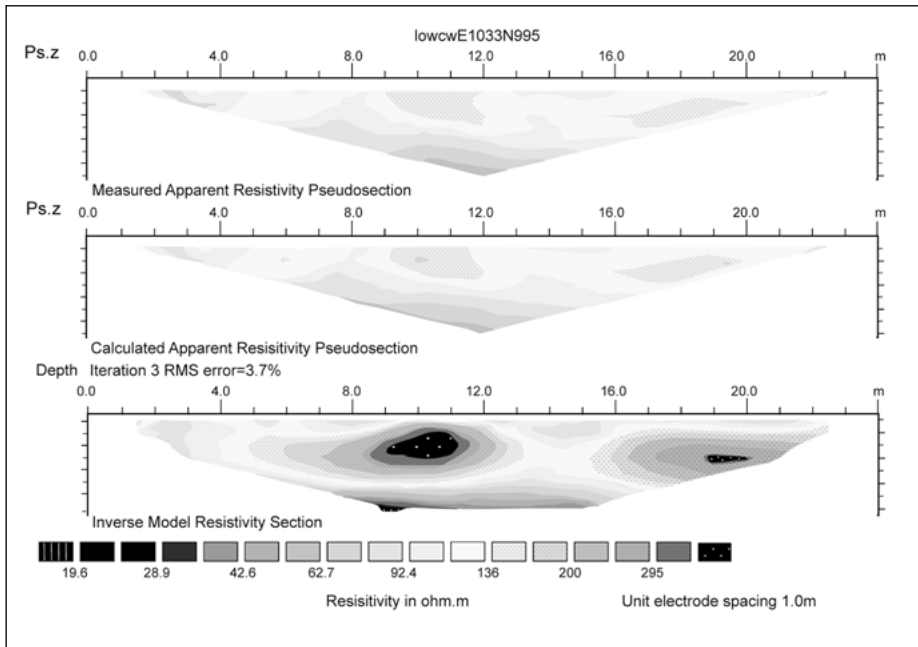


Figure 5.5: Tomography results (photo Çaltılar Archaeological Project [ÇAP]).

ornately carved panels, or cut blocks. They have been built into the threshold of public properties (such as the perimeter walls of both the older village mosque, originally constructed in the 1920s as a guest house but converted and possibly renovated to a mosque by 1958, and the newer, larger mosque of c.1985) and private houses, where they sometimes additionally form part of the exterior façades. Several pieces were also found in fields to the south of the *höyük* itself.

In addition, in 2009 a series of Tauber pollen traps were deployed on an altitudinal transect in the woodland above the village as a means of better interpreting extant ancient pollen data (e.g. Momigliano et al. 2010, 25; see also Eastwood et al. 2007).

Finally, we also conducted an ethnographic investigation into traditional pottery production practices in the region today, which is evident in the nearby village of Esenköy. Here, women are responsible for the collection and processing of clay and the manufacture and firing of traditional pottery, which is wheel-made. Knowledge of these processes is transmitted through female kinship lines and remains particular to each village, such that if a woman moves to another village, perhaps through marriage, she is sworn to secrecy as to how her village of origin sources and processes their clays and produces their particular pots (Momigliano and Kibaroglu, forthcoming).

Material Results

In our first year alone, we collected, washed and processed over 14,000 sherds and recovered almost 400 other finds, including flint blades, querns, slag, and the occasional shotgun casing and donkey shoe. By the end of our 2009 season, those figures had swelled by approximately 18,700 sherds and 580 finds, bringing our total to around 33,000 sherds and 1,000 other artifacts.

The earliest ceramic material found on the surface of the site may be assigned to the Late Chalcolithic period (second half of the fourth millennium B.C.). This material is hand-made and chaff-tempered, and the surface is often burnished, but not always. The closest parallels are Late Chalcolithic material from Elmalı-Bağbaşı, and one unique piece appears related to types known from contemporary Beycesultan and Aphrodisias.

There is also evidence of substantial occupation during the Early Bronze Age (third millennium B.C.). It is not clear whether the site was occupied in Early Bronze Age I, but there is evidence of significant occupation during Early Bronze Age II and possibly Early Bronze Age III phases. Much of the pottery is handmade, but some fragments belong to wheel-thrown vessels. Evidence of imports during this time can be seen particularly in micaceous pieces, which may originate in the Denizli/Menderes massif area, while other types come from Elmalı, in the next upland to the east, as suggested by our petrographic results.

We have also identified for the first time in this upland region evidence of second millennium occupation, i.e. pertaining to the Middle and Late Bronze Ages. What we have is small in quantity and lacks sufficient diagnostic characteristics that could allow for more precise dating, but this evidence is nevertheless extremely important because archaeological remains of the second millennium in Lycia and elsewhere in southwest Turkey are relatively rare and not widely known. Our petrographic analysis indicates that a number of these were also imported, including from the Denizli/Menderes massif, and the area around Elmalı.

The majority of our pottery dates to the Iron Age, specifically the tenth to the sixth centuries B.C., since this is the latest period of occupation and thus the most widely exposed. Most date to the Middle Iron Age and Late Iron Age periods (roughly the ninth to sixth centuries B.C.), although some styles and shapes, especially concentric motifs and high-footed monochrome bases, compare to material elsewhere associated with the Greek Protogeometric period, which would indicate at least tenth century occupation.

We have a number of sherds, many of which belong to large and highly decorated vessels, that have been imported to the site from elsewhere in Anatolia. The origins of these include Phrygia (late eighth/early seventh centuries); several production centers in western Anatolia (eighth and seventh centuries) and the islands (seventh century), and Lydia (sixth century). Some material was also imported from Greece, including Euboea (eighth century), Corinth (seventh century), and Athens (seventh/sixth centuries).

Preliminary petrographic interpretations suggest that many of the sherds we associate with the Iron Age, and, indeed, from all the main periods of occupation at the site, come from four main geological zones. These include the Çaltılar basin itself, which is characterized by the inclusion of serpentinite; calcareous clays from the region of Elmalı, which is in the next upland basin to the east, or the mountain in between; a clay characterized by slate inclusions, which may originate in the western part of Denizli and the so-called Menderes massif region, which are considerably to the north; and a small fourth group that cannot yet be placed into any of the main geological areas.

Even within this breakdown, further distinctions are possible. For example, we have a notable collection of large, thickly-slipped vessels of eighth and seventh century dates that originate somewhere in western Anatolia (Southwest Anatolian Ware). Some have a distinctive thick white slip, while on others the slip is more pink, and we have a group of red slip with added white and black, rather than white slip with added red and black. Each of these is petrographically discrete, which suggests several production centers were exporting their wares to Çaltılar, or perhaps the residents of Çaltılar were importing material from a number of different production centers in western and southwestern Anatolia, clear distinctions between which have not previously been established.

We have several fabrics that we considered to be “local” because of their ubiquity and longevity at the site. Our petrographic analyses reveal, however, that a number of sherds that look identical macroscopically, and even with a hand-held magnifying glass, such that we might consider them to belong to a common group, in fact belong to clays of very diverse origins. Several such “groups” appear to be composed of examples with clays that originate near Çaltılar, the calcareous clays associated with Elmalı, and the slate-rich clays that may be associated with the Denizli/Menderes massif zone. This suggests that much of the material we had originally considered “local” comes not only from our immediate upland basin, but also regionally, and is related to a geographic *koine* in affinity with wares produced elsewhere in southwestern Turkey.

Notable, therefore, is the fact that the Late Iron Age table wares we subjected to petrographic analysis—selected to cover the visually-observed range of fabric types, including types we had deemed to be local and types we knew were likely imports (from western Anatolia)—come almost entirely from what has been initially identified as the Denizli and Menderes massif zone. This may be suggestive of the nature of Çaltılar’s connectivity, especially socio-commercial relations, during the seventh and sixth centuries.

Little material can be dated to after the middle of the sixth century. Later Iron Age (often described as Archaic and Classical, as derived from Greek-based classifications, although a Persian periodization is also used sometimes in the eastern Mediterranean: see Lehmann 1998), Hellenistic, Roman, Byzantine and Islamic wares account for less than one percent of the total assemblage. With virtually no such wares recovered from

the site, Çaltılar's settlement history as suggested by the pottery implies that occupation ceased during the middle of the sixth century. This coincides very neatly with the historical date of the Persian annexation of Lycia, described in dramatic detail in Herodotus's tale of the destruction of Xanthos by Harpagus (1.176). Herodotus notes that eighty families were away from Xanthos when Harpagus laid siege to it, and it has been widely assumed that these families were instead in the *yayla* (e.g. Treuber 1887, 92–93; Metzger and Coupel 1963, 80 n. 23; Bean 1978, 50; Harrison 2001, 29). The largely seasonal nature of Çaltılar today initially made us speculate whether the ancient site also served as a seasonal summer settlement in antiquity. Our results, however, suggest otherwise.

We were surprised by the sheer number of imported Iron Age sherds collected from the surface alone, and the geographical distance of their production origins—from as far as Phrygia and Lydia all the way to Greece—for a relatively small site on a modest upland plateau. Furthermore, we were struck by the large size and elaborate decoration of many of the vessels. We questioned, therefore, whether a community really would haul their high status, imported, large and heavy pottery all the way from the coast for the summer season in their *yayla* village? The status value associated with imported pottery in general has further made us wonder if Çaltılar served a different function during the early first millennium B.C. rather than just as a summer pastoral residence for coastal dwellers, as it is today.

We suspect that the large stone-walled building holds a key to answering questions about the nature and role of the site. Stone buildings of such dimension tend to be associated with the Late Iron Age, as early as the eighth century B.C., generally speaking, and such structures are usually identified as a temple or a fortification.

The Inner Defence Platform (sic) at Old Smyrna, for instance, seems to have been laid during the second half of the eighth century B.C. (Cook and Nicholls 1998, 49). “Inner Defence Platform” refers to a great fill of mostly river stones bedded in clay mortar. This was encompassed by a wall built of river stones to a substantial height, with a mud-brick superstructure. Nicholls believes that it served as a modest fortress just inside the city during the eighth and seventh centuries to control access to the circuit wall and to the defenses of the North East Gate. Although its name alludes to a military purpose, it may also be a contemporary temple, suggested by votive evidence pertaining to this feature. In addition, this part of the site developed subsequently into the principal cult-place of the city. Finally, it is during this period that the first ramp was constructed up to the platform. We may also have a ramp at Çaltılar that leads up to the stone structure, but this is difficult to ascertain with greater certainty without excavation.

The site of Akalan, near the shores of the Black Sea, is another contemporary fortified site with similar rectangular structures (for recent results, see Dönmez and Uluggergerli 2010). The origin of the fortress itself is usually dated to the early or mid-sixth century (Dönmez 2004; see also Macridy 1907; Åkerström 1966, 132). The site's local wares derive from the Central Anatolia Alişar IV sequence (ninth and eighth cen-

turies B.C.: Matsumura and Omori 2010), while the site imported a notable amount of Wild Goat material and other so-called East Greek wares during the seventh and sixth centuries (Macridy 1907; Willson-Cummer 1976).

It may be that Çaltılar was something similar during its Iron Age occupational phases, although any further discussion about the precise nature of the site would be purely speculative (see also Işık 2010). Nevertheless, our results have illuminated a number of features of modern Lycia's past. Although the area serves as a *yayla* today, our results suggest strongly that Çaltılar itself was something much more substantial than a seasonal destination, and certainly well connected to other regions. This is very much the case for the Iron Age, given the large, ornately decorated, expensive and high status pottery vessels from a variety of origins near and far, and that there is a substantial stone structure here with walls at least two and a half meters high. Such a claim may also be made for at least the Early Bronze Age, given the quantity of imported material during this phase of occupation and its extent along the lower terraces. Collectively, these results overturn general assumptions made by Bean, Harrison and others about the role this region might have played in the past, although it does not exclude the possibility that it nevertheless maintained a symbiotic relationship of some sort with the coastal settlements. Perhaps the eighty families who were away from Xanthos when Harpagus laid siege were in this area, although whether it was explicitly to seek refuge in a sanctuary or fortified site or for some other reason we can only muse upon fancifully. Nevertheless, our results indicate that the region itself in its pre-Greco-Roman eras was something much more significant on the road through Turkey's southwestern land corner and that it played a major role in connecting the populations around the Mediterranean shores with the kingdoms of Anatolia.

Conclusions

Classical archaeology cannot, and should not, be regarded independently from other archaeological periods in a particular region. Indeed, the development of an area's Greco-Roman period is conditional upon social, cultural and economic histories particular to that region. The Çaltılar Archaeological Project's work to date at the site of Çaltılar itself exemplifies this. Already we have generated an understanding of the connectivity of this upland zone during periods prior to the Persian conquest, and we have suggested possibilities surrounding the role this area may have played as a nexus between land and sea, and across regions. Thus, the ability of the Çaltılar Archaeological Project to address the nature of settlement over the *longue durée* through survey work alone renders it a self-contained field project in its own right (it may, however, also satisfy the strong encouragement of survey prior to an excavation permit application). In short, therefore, it still does not take a Big Dig to address big questions (in support of Dyson 1993, from the classical archaeology perspective)—

which contrasts with Turkey's aim to have Big Dig-style archaeological investment, indicated by its requirement for ten-year field work plans at the start of an excavation project—although survey work more often than not will raise additional questions than it might answer, as the Çaltılar Archaeological Project demonstrates.

The Çaltılar Archaeological Project is not considered a classical archaeology project in the eyes of the Turkish authorities, precisely because it is not examining periods pertaining directly to Classical Greece and Rome. Çaltılar *höyük's* Chalcolithic, Bronze and Iron Ages renders the site as pertaining more to Pre- and Protohistoric Archaeology; its latest phase, which covers the seventh and sixth centuries, and thus in some contexts is called Archaic, makes it more ambiguous yet still not fully Classical either as a specific period (fifth-fourth centuries B.C.) or as referring more broadly to Greeks and Romans. Yet in other regards, the project itself may nevertheless be considered more broadly as classical archaeology. The later Bronze and Iron Ages of, especially, the Aegean world, have an affiliated history of scholarship to later Greek and Roman studies (Morris 2004, 257–258), especially when one considers that early excavators sought sites and aimed to link strata with historical events discussed in the ancient Greco-Roman texts, such as with regard to Troy and the Trojan War. Indeed, in Turkey material connected to the Bronze Age Aegean world, such as Mycenaean pottery, is regarded as classical archaeology, while study of the (later) Phrygians is considered Protohistory (V. Köse, pers. comm.). One may argue, therefore, that classical archaeology is not Classical in any classical sense. Terms like Classical, Greek and Roman have more than just temporal and cultural indications. Projects like the Çaltılar Archaeological Project (and, for this area, the congruent, more regional Balboura Survey) underpin our understandings of the development of the subsequent periods that may form the core temporal and cultural emphases of classical archaeology, but Greek and Roman are not all that classical archaeology pertains to. These kinds of sites and regions must be assessed from the perspective of their own contexts, in this case as a settlement situated in the southwestern corner of Anatolia that maintained strong connections with other cultural groups during many of its periods of occupation. The mix of ceramic material from Çaltılar itself, especially during its latest period of occupation, suggests that we need to consider the site in its own terms without prioritizing any one cultural group over another, if we are ever to understand the nature of the site and how its residents lived and moved through the landscape and connected with their local and regional neighbors. Understanding these phases will also enable us to shed further light on subsequent socio-cultural development of the region. Indeed, the diversity of practice of Greek and Roman culture in general means that we can no longer accept fixed notions of what being Greek or Roman meant anywhere in the ancient world. For this reason, an integrated perspective and approach to research questions, and to fieldwork projects in general, as outlined above, is more fruitful.

Regardless of what period a project is defined as belonging to, the contemporary climate of conducting archaeological research in Turkey nevertheless does pose challenges, especially as the government amends regulations and requirements frequently.

Yet two recent studies on Turkish archaeology, by archaeologists, have suggested that projects need to be proactive to stakeholder involvement, rather than reactive, as they currently are, as means of maintaining intellectual control in the face of pressures by the state to develop archaeological sites as revenue streams derived from tourism (Shoup 2008; Gökay 2009). Independently, they argue that archaeologists should incorporate planning, management and outreach activities as part of their research designs, which should “help to build a constituency for archaeologists, as they try to reshape the discourse about sites away from spectacular entertainment toward an understanding of the past that better meshes with the archaeological evidence... broadening the definition of the discipline to include conservation, planning, management, and ethics might open the way for archaeologists to build the social and political capital that they need in order to maintain their role as stewards of the past” (Shoup 2008, 338–339). Indeed, archaeologists elsewhere in the Mediterranean are becoming more reflexive, especially in their engagement with the communities in which they work (e.g. papers in Stroulia and Sutton 2010). Our own collaboration with Turkish academics and students were not required by the authorities for our survey permit but derived from our desire to work more closely with Turkish colleagues. Our outreach activities have similarly been a proactive means of fostering and maintaining positive relationships with our hosts, and to enable the local development of a better understanding of the area’s socio-culturally complex heritage, which extends considerably beyond modern memory and community oral histories; they were not conducted as a mere public relations exercise. Nevertheless, politics continues to influence the directions of archaeological practice in the early twenty-first century, including the ways that scholars approach ancient cultural landscapes, form broader theoretical perspectives and contextualize research to peers and the public. While there is clearly an integrated dialogue between realms of data and interpretive methodologies, the circumstances of politics affect the practical and methodological, and in some cases interpretational, frameworks in which the work itself is actually conducted.

In sum, it could be said that the aims and methods of the Çaltılar Archaeological Project both respond to and anticipate changing perceptions of archaeology in Turkey, and the position of classical archaeology, in particular. From the beginning of the survey, we have incorporated activities that are currently required of excavation projects, such as having a Turkish co-director, planning for storage, and preparing for sustainable heritage management. In terms of regulations, the Project’s survey work at the site of Çaltılar itself stands as both a self-contained project and as the potential foundation for new research avenues, including excavation. The integrated research design of the project enables us to answer socio-cultural questions for periods previously relatively inaccessible in Lycia, even by excavation, and which have been otherwise only of limited interest, since most research in Lycia has focused on the Graeco-Roman periods. As such, projects such as the Çaltılar Archaeological Project create new dimensions to the merits of classical archaeology both as a discipline and in practice.

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Alexandra Alexandridou

6 Shedding Light on Mortuary Practices in Early Archaic Attica: The Case of the Offering Trenches

Abstract: The seventh century B.C. saw a number of changes in Attic mortuary practices with the emergence of the offering trenches being one of the most characteristic. The earliest examples came to light in the late nineteenth century in association with a number of tumuli in the Attic countryside, although the cemetery of Kerameikos revealed the richest evidence, which has been thoroughly published and studied. The trenches contained good quantities of Protoattic and early black-figure pottery, which formed the focus of the early scholarship because of its importance for the study of the Attic vase painting. Nevertheless, during the last two decades, offering trenches have been employed by a number of scholars as a medium for approaching early Archaic Attic society during a period of special interest, which coincides with the early development of the polis. The offering trenches serve as a case study for showing the shift in archaeological research on early Attica with scholarly interest moving from the finds to their archaeological context, and focusing on the importance of funerary practices for the study of contemporary society. Moreover, the present contribution reassembles all the known trench-evidence from Attica, while re-examining their funerary and social implications for the contemporary polis.

Introduction

Offering trenches form the most characteristic funerary feature of seventh- and early sixth-century Attica. With the goal of reconstructing the contemporary social history of Attica based on the available mortuary evidence, these trenches have been a central concern of scholars especially over the last two decades (Houby-Nielsen 1992; 1995; 1996; D’Onofrio 1993; Kistler 1998; Alexandridou 2008; 2009; 2011, 34–36; 2013).

The Attic offering trenches can form a constructive case study, illustrating the importance of archaeological context in shaping an understanding of contemporary social practices, which are poorly documented in much later historical sources. The present contribution focuses on the historiography of research, in an attempt to demonstrate the shift of scholarly focus from the excavated material—in particular the fine decorated vases—to their context and the questions raised on the funerary, ritual, and social character of the trenches, and their use as a tool for providing new insights into early Archaic Attica.

Seventh-Century Burial Customs and the Offering Trenches

Because of the rich archaeological evidence, burials and mortuary customs have become critical material sources for approaching early Attic society (Morris 1987; Whitley 1991; D'Onofrio 1993; Houby-Nielsen 1992; 1995; 1996). The adoption or abandonment of the polis model has been interpreted within the frame of the changes observed in the funerary record (Morris 1987). The seventh century is of particular interest, since after around 700 B.C. a number of very important changes in burial customs have been observed, posing questions for their implications for the contemporary social developments.

The early seventh century saw the clear separation of burial grounds from residential areas (Morris 1987, 65–69; for the exception of the Archaic necropolis in the Athenian Agora, see Young 1951; Morris 1987, 67–68). At the same time, a sharp decline in the number of graves is observed (Morris 1987, 85–86, 128–31, 134–37; Osborne 1989; Houby-Nielsen 1992; for Attic sites, Whitley 1994a, 68–70; D'Onofrio 1997, 79–84). This drop becomes even more striking if the chronological range of burials—especially in the Attic countryside—is taken into consideration; only few date to the first quarter of the seventh century, while the majority spans its second half. The restricted representation of the adult population in the mortuary evidence has been interpreted as the result of an exclusion of *kakoi* from burials, with only the elite members receiving an archaeologically visible funerary treatment (Morris 1987, 97–109). Rich female burials, prominent in Early Iron Age Attica, disappear (Whitley 1996) and children, who reappeared in the Attic burial record only in the late eighth century, are now separately buried from adults in specially defined areas. The Phaleron infant cemetery is a characteristic seventh-century case (Pelekidis 1916; Young 1942). This separation followed the Late Geometric II tendency of infant and child burials taking over adult depositions at particular cemeteries (Morris 1987, 83–85).

More importantly, the adult burial treatment radically changed, with primary cremation replacing inhumation, which had begun to prevail after the middle of the eighth century (Morris 1987, 97–109; 1995). Even though not completely absent (e.g., Kübler 1954, G60, G61, LXXIV.74), seventh-century adult inhumations are very few.

Offering trenches become the “trademark” of contemporary burial practices. Their adoption is combined with the scarcity of grave goods. Very few objects are destined for the grave, while metal objects become extremely rare (Morris 1987, 103–104). The first offering trench, which came to light in association with a tumulus at Vourva in Attica, was mentioned as “στένόν” by the excavator (Stais 1890b, 321). The excavations in the Kerameikos brought to light several well-preserved examples of “Opferrinnen,” as characteristically named by the excavator Karl Kübler, which have been thoroughly published and studied (Kübler 1959). Eleven offering trenches, nine of which had their contents intact, and four offering places were explored in this necropolis (Houby-Nielsen 1992, 348 and Appendix I). The trenches are quite shallow mud-brick

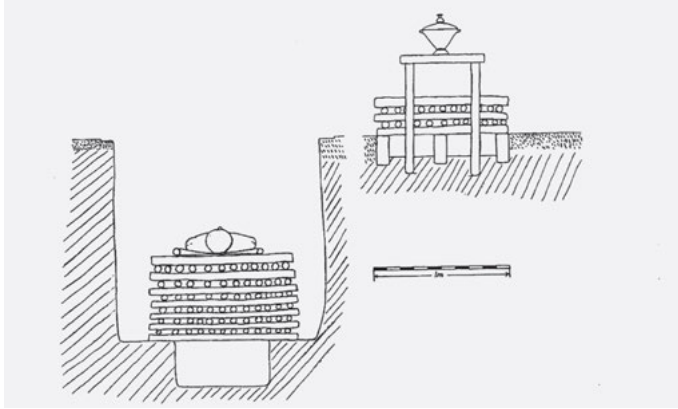


Figure 6.1: Reconstruction of a Seventh-century Cremation Burial and Offering Trench (after Houby-Nielsen 1996, 45, fig. 1).

constructions, with lengths varying from three to twelve meters, a width of approximately one meter and depths of ten to twenty centimeters. Rows of mud-bricks formed their edges or divided them into two channels. The exploration of trench K I 4 from the Kerameikos, which revealed a thick layer of ash filled with burned vase fragments and bird bones allowed for the reconstruction of the ritual practice taking place over the trench. Vessels and other offerings were not burned inside, but as indicated by the holes detected at regular distances in the trench, filled with charcoal, they were set on a wooden table which was subsequently set on fire and collapsed together with the objects within the trench. A layer of plaster sealed the trench. According to the stratigraphy, the ceremony took simultaneously with the cremation of the body when the grave was still open (fig. 6.1) (Kübler 1959, 87–88; Kurtz and Boardman 1971, 75–76; Houby-Nielsen 1996, 44; Kistler 1998, 38–41). A mound, often marked by an open shape, such as a skyphos-krater, would cover the burial and the trench after the end of the funerary ceremony.

Although the proposed reconstruction of the trench ritual has been generally accepted, Hampe argued in favor of a post-burial funerary practice, which took place during the *enata*, namely the ninth day after the burial, according to the literary sources (Hampe 1960, 71–75). The idea of a post-burial ritual has been already put forward by Helbig (Helbig 1900, 250–269), but also by Stais when he explored the example at Vourva. According to the latter, the trench was seen to have received the remains of the *perideipnon* or the *enagismata*, which were to have taken place during the third or the ninth day after the burial (Stais 1890b, 321).

The inspiration for these mud-brick constructions has been assigned to the channels opened for the air circulation within the pit needed during cremation (Kübler 1954, 30; con. Houby-Nielsen 1996, 51). According to Kübler, they could have developed from the Early and Middle Geometric cremation burials with the cremated

remains being followed by burned offerings too (Kübler 1954, 30–31). The roots of the deliberate burning of objects over trenches have been sought in the Early and Middle Geometric period, when graves contained two separate deposits with burned or unburned objects (Houby-Nielsen 1992, 354–355). The trench custom thus seems to have continued a Late Geometric tradition, as indicated by two Late Geometric trenches and four contemporary deposits explored in the Kerameikos (Krause 1975, 132–135) and the Athenian Agora (Young 1939, 44–55, Grave XI, figs. 29–31, 55–67, Grave XII, figs. 2, 37–42).

Destruction is the key feature of the offering trenches. This phenomenon should be firstly considered on a psychological level. Death is pollution (Parker 1983, 32–73) and fire, like water, can act as means of purification. Intentional breakage may be seen as a natural response, as an act to avert the evil of death and as a special expression of grief or even anger for this loss. According to some literary sources, destruction is considered necessary since the dead could not profit from the offerings unless they have been burned (Ekroth 2002, 232–233). This concept, however, applies to personal belongings of the deceased and cannot be applied to the vessels destined to serve this particular ritual. The deliberate destruction of an object is commonly assigned to a process of “defunctionalization,” an act of ritual “killing,” aimed at removing the objects from their original circulation when intended for grave contexts (Åström 1987). The swords bent around the neck of the funerary urns in Early Iron Age Attic graves are characteristic examples of the practice (D’Onofrio 2011). The specially commissioned trench shapes, however, were initially designed to serve a funerary ritual and did not have any practical uses before being destroyed over the trenches. Even though they were conceived as sympotic symbols, they were never used during actual banquets, a point I pick up in the discussion below.

The funerary trench ceremonies in seventh-century Attica share common features with potlatch, a ritual that includes redistribution or destruction of wealth, practiced by a number of tribes of the northwest American coast in order to mark the most important and transitional stages in one’s life (Bataille 1997, 172–174; Jonaitis 1991; Mauss 2002). Perhaps comparable to potlatch rituals, trench ceremonies were aimed at separating wealth from normal consumption practices by using objects, the practical function of which was meant to be negated through the process of deposition. The value of these individual objects then becomes defined and enhanced by their destruction. And the choice of luxury items is indicative of the status of the deceased and the burial context, which derive power through ostentatious destruction (Bataille 1997, 173, 203–208).

Offering Trenches and Protoattic Pottery

The traditional study of offering trenches is closely interwoven with that of the seventh-century fine decorated Attic pottery, since the most elaborate examples were discovered within trenches, and especially in the Kerameikos. Even though the excavators of the examples in the Kerameikos and elsewhere in Attica did focus on the trenches and the funerary rituals associated with them, the scholarly emphasis was largely the vases themselves and their importance for the study of Greek vase painting. A contextual approach to Protoattic pottery, and more importantly, detailed studies of the trench phenomenon within the broader context of mortuary behavior in Attica, in efforts to understand contemporary social developments, did not appear until the 1990s.

Only very few Protoattic shapes were known before the middle of the nineteenth century. Already in 1887, Johannes Böhlau introduced the term “Frühattisch” for this category of pottery and succeeded in showing that the style derived from Attic Geometric, while far from the developed black-figure, they were forerunners of the François Vase (Böhlau 1887). The term “Protoattic,” as a translation of “Frühattisch” was created on the analogy of Protocorinthian, introduced by Adolf Furtwängler (Furtwängler 1883, 154) and was introduced by Smith in the publication of the monumental amphora from Kynosarges (Smith 1902, 29; Morris 1984, 3).

A number of excavations towards the end of the century brought to light important finds which filled the gap between Protoattic and the François Vase. The developing stylistic approach is apparent in the case of the louterion from Aigina published by Adolf Furtwängler (Furtwängler 1882). This approach has been also applied to two contemporary fragments from Aigina and Phaleron (Benndorf 1883) and the Nessos amphora, which came to light in 1890 (Stais and Wolters 1890).

Although Valerios Stais, the excavator of the tumuli at Vourva and Marathon, provided a detailed account of the excavation results and presented the context of the discovered shapes, he dedicated a large part of his articles to the stylistic analysis of the vases, clearly because of their perceived importance as further additions in the list of the known early black-figure pottery. The earliest skyphos-krater from the Vourva trench was considered Protoattic, while the rest are mentioned as “Attico-Corinthian” or “Corinthian-Attic,” terms stressing the Corinthian influence on Attic early black-figure (fig. 6.2) (Stais 1890b, 323–329; 1893, 57–59). In the German bibliography, “Vurvavasen,” “Vurvastil” or “Gattung von Vurva” are the terms adopted for these vases (e.g., Böhlau 1898, 116; Klein 1904, 223; Buschor 1921, 71–72; Graef and Langlotz 1925, 51). In the following decades, until the publications of Beazley and Payne, the term “Attico-Corinthian” or its German equivalents were used for labeling Attic vases of the first third of the sixth century bearing animal frieze decoration in order to denote a special class (Beazley 1923, 199; Payne 1931, 190).

The earliest more systematic study of Protoattic pottery followed the traditional path of connoisseurship with the stylistic analysis and the attribution to particular



Figure 6.2: Lekane of Stais' "Attico-Corinthian" style. Athens, National Museum, 1000 (photo A. Alexandridou).

hands being the main research focus. Connoisseurship is closely linked to Sir John Beazley who devoted his life to the study of vase painting, accomplishing the formidable task of distinguishing individual hands of painters of thousands of Athenian vases and forming the basis for the chronology of Athenian black- and red-figure pottery (Beazley 1956; 1963; 1971). Despite the common criticisms today (Whitley 1997; Turner 2000. *Pro Beazley*: Williams 1996; Oakley 1998, 1999, 2004a), the impact of his work on pottery studies is indisputable (Bothmer 1987, 201). Under his influence, pottery studies became a feature of British scholarship. John Cook, one of his followers, applied Beazley's methods on Protoattic pottery, making the first identifications of painters (Cook 1934–1935) and dividing the production into three chronological periods—Early, Middle and Late—based on stylistic criteria.

A further step in the progress of the stylistic study of Protoattic vases was with the addition of more painters—as well as the expansion of the list of the works of painters already recognized by Cook—when Richard Eilmann and Kurt Gebauer published a number of fragmentary vases in the Berlin Antiquarium from Aigina, mostly dating to the first part of the seventh century (Eilmann and Gebauer 1938, 5–39; Morris 1984, 14). A number of other contributions followed the same path (Mylonas 1957; Brann 1962), with the most significant belonging to Sarah Morris (Morris 1984), and the most recent and comprehensive synthesis belonging to Giulia Rocco (Rocco 2008). The focus of these studies remained the development of the ceramic workshops, their characteristics and stylistic relationships as well as the organization of their production. A contextual examination of this enormous corpus of pottery is almost entirely absent.

The first publication of the elaborate shapes from the North Necropolis of Vari by Semni Karouzou is indicative of the focus dedicated to stylistic study, which left little space for a contextual analysis (Karouzou 1963). Three monumental black-figure skyphos-kraters on supports and a number of lekanai formed the basis of her publication, since they could be attributed to important painters of the early black-figure period like the Nessos Painter. Her main aim was to place the shapes in the history of Athenian figured vase production. Her contribution was largely influenced by the Beazleyan methods as characteristically shown by the debt expressed to Beazley in her introduction (Karouzou 1963, 9^o). Prior to this publication, some of the shapes had been already included in Beazley's black-figure vase catalogue (*ABV* 2.2–4, 2.1–2, 3.4, 3, 4, 5.6–9, 6, 7). The vessels were indeed very important for the study of the development of the early black-figure production of the first generation of painters, and came to fill the gap between the transition from Protoattic to black-figure during the last decades of the seventh and the beginning of the sixth century. Since their discovery it has been stated that these vases belong to “the first great period of black-figure painting in Attica.” (Payne 1935, 154). Two more articles published in the 1980s, presenting a number of monumental amphorae from the same necropolis, followed the same lines. Karouzou's contribution to the study of early black-figure is the recognition of additional painters, whose work until today is known only from the finds from the necropolis of Vari (Karouzou 1982; 1985).

Notwithstanding the dominance of the stylistic approach, which was entrenched by the overarching influence of Beazley, there were early and sporadic attempts to examine seventh-century Attic pottery in close relation to its context and function. The examination of the uses of Protoattic *louteria* in cultic practices is a characteristic case (Kenner 1935, 130–134; Whitley 1994a, 52).

Before the detailed publication of the seventh-century pottery, when discussing the features of the offering trenches, Karl Kübler attempted to interpret the role that elaborate vases played in mortuary ritual. According to Kübler, the trench finds served as grave offerings (Kübler 1959, 87–88; 1970, 87–92); they did not belong to the deceased, but were specifically commissioned for this funerary ritual (Kübler 1954, 30–31). Due to the lack of offerings placed within the graves, Kurtz and Boardman (1971, 75–76; *con.* Kistler 1998, 43–45) maintained this view. Even though the publication of the ceramic material from the Kerameikos excavations remains a fundamental resource today (Kübler 1959; 1970), Kübler's stylistic development of the Protoattic finds has been largely criticized (Knigge and Walter-Karydi 1974) on largely formal and typological grounds: his analysis did not take into account specific painters and workshops, and he did not engage in questions of manufacturing. That said, the pottery was examined in close relationship to its context.

A contextual approach was followed for five elaborate clay cauldrons of unknown provenance, today in Mainz, which have been interpreted as trench finds and published in detail (Hampe 1960). Although Hampe devoted most of his study to the analysis of the shapes and their decoration, he also elaborated on their possible functions

during the funerary ritual over the trench (Hampe 1960, 71–75). He underscored the value of the vessel types and shapes, and their production and acquisition especially in the context of trench rituals. Some of the characteristics of the shapes, like their handles, their fragility and the absence of gloss in their interior supported the idea that they were symbolic in character and appropriate as offerings to the dead (Hampe 1960, 4, 71; Rocco 2008, 20).

The purposes that the trench pottery intended to fulfill have been interpreted differently by a number of scholars. Whitley seems to have partly retained Kübler's argument, considering the trench shapes offerings to the deceased, but not grave goods, since he disassociated them from the funerary ritual and assigned them a cultic character (Whitley 1994b, 217). According to Houby-Nielsen, the shapes' number and composition suggest that they could not have served an actual banquet, but they rather acted as its symbolic manifestations, reflecting the wealth and the lifestyle of the deceased and his social circle (figs. 6.3–4) (Houby-Nielsen 1992, 349; 1996, 46–47, 49). The shapes represent an elaborate banquet set indicative of a "heroic richness" (Houby-Nielsen 1992, 356). The white slip covering the shapes has been thought to imitate ivory, while the applied clay figures to the comparable decoration of bronze cauldrons. Therefore the destruction of clay shapes with skeuomorphic aspects was meant to denote the conspicuous consumption or ritual rationing of lavish vessels of precious materials. The ritual was then intended to represent aspects of the deceased, with the vases being "not gifts to the dead, but rather a material expression of a quality of the dead." (Houby-Nielsen 1996, 49). In contrast to Houby-Nielsen, Anna Maria D'Onofrio interpreted the shapes and the rest of the finds from the offering trenches as remains of an actual meal, which must have been preceded by animal sacrifices taking place into the grave (D'Onofrio 1993, 148–149). The few bird bones, shells and eggshells, however, do not form sufficient evidence for the realization of funerary meals in honor of the deceased (Kistler 1998, 48–49).

The close association of these shapes and funerary ceremony with banqueting has, however, been retained and further elaborated by Kistler (1998). Focusing on the burial group of Hagia Triada in the Kerameikos, he presented a thorough examination of the trench shapes and in particular, their combinations, in an attempt to offer a more secure answer to the question of their role and purpose. His scheme (M)-(T)-(G)-(A) corresponds to the combination of mixing, drinking, pouring and other types of shapes including dining wares, oil containers and thymiateria, which appear in the earliest trenches, but which seems to have gradually faded away, with the late seventh-century trenches presenting no particular combination. For Kistler, the vases served as "Scheingeschirr" and following this particular shape combination, they were meant as substitutes for oriental metal vessels, and as replacements of actual banquet sets (Kistler 1998, 37–38, 49–50). They were specially produced and commissioned to serve this particular funerary purpose without bearing any cultic connotations. They have been closely related to the orientalizing phenomenon and the adoption of oriental aspects of lifestyle and banqueting in particular (Kistler 1998, 50–54).

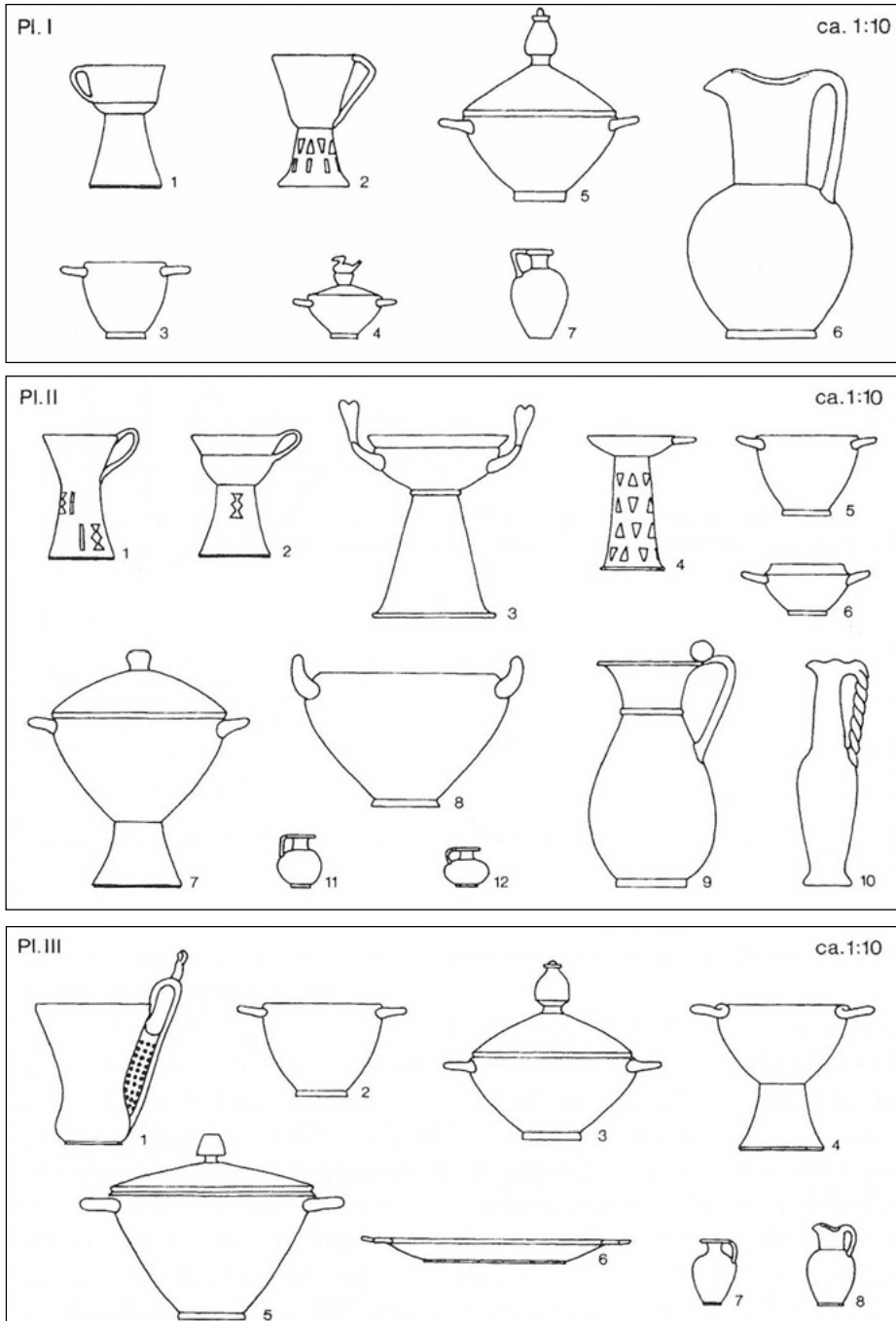


Figure 6.3: Representation of vase shapes from Kerameikos trenches (after Houby-Nielsen 1992, 350–351, pls. I–IV).

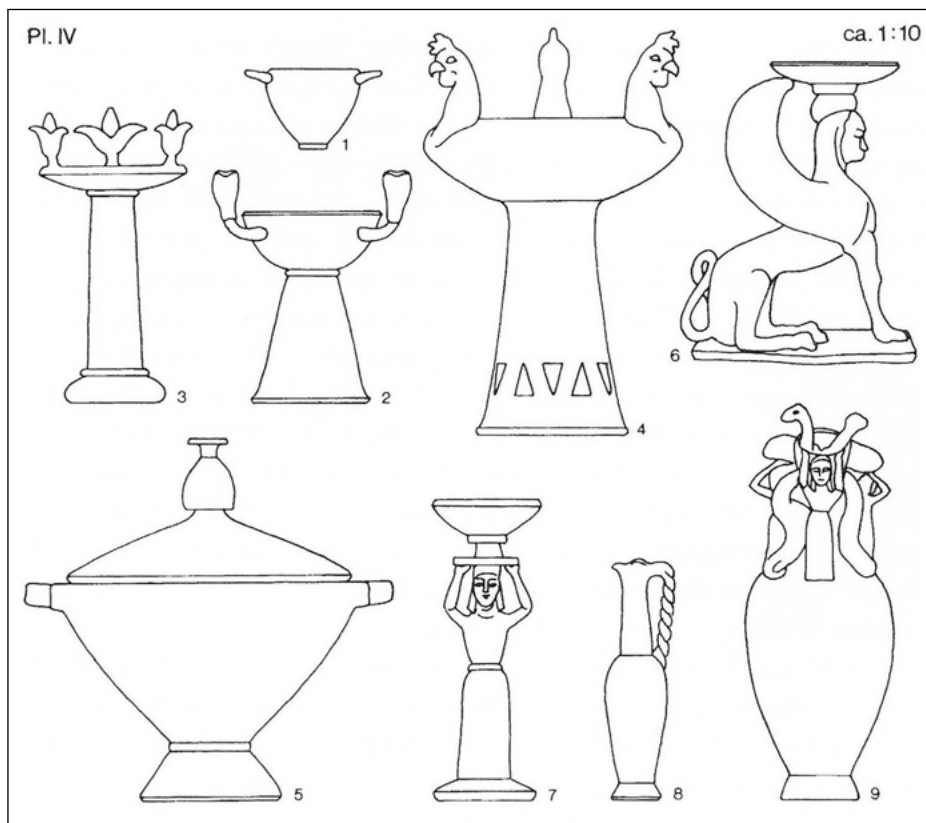


Figure 6.4: Representation of vase shapes from Kerameikos trenches (after Houby-Nielsen 1992, 350–351, pls. I–IV).

In a detailed examination of the role and uses of the trench shapes, largely focusing on their implications for their contemporary social context, James Whitley provided an overall systematic contextual approach to Protoattic pottery, though without being limited to the trench finds (Whitley 1994a). Whitley brought Protoattic into connection with Subgeometric, (including both coarse and imported fine wares), examining in detail the uses of the shapes in close connection to their context. The production of seventh-century fine pottery has been interpreted through the prism of social rationing: it was only the Attic elite that had access to these vases, controlling their restricted production, which aimed at covering particular needs, and therefore appeared only in particular contexts, with the Attic necropoleis providing the majority.

Setting as a starting point the introduction of the black-figure technique in the Attic workshops at around 630 B.C., my own contextual study focused on the last quarter of the seventh and the first quarter of the sixth century in an attempt to explore

further the purposes that the earliest black-figure pottery served and its implications for contemporary social developments (Alexandridou 2011). Both studies developed interpretive frameworks for understanding contemporary burial customs, focusing on the offering trenches and the funerary rituals for which these elaborate seventh-century shapes were intended (Whitley 1994a, 54; Alexandridou 2011, esp. 33–36).

Offering Trenches in Attica

Tumuli at Vourva and Marathon

The earliest offering trenches came to light in the Attic countryside at the end of the last century. Valerios Stais excavated the tumuli at Vourva and Marathon and published his results in detail in 1890 and 1893, respectively. The exploration of the tumulus at Vourva, close to modern Spata, resulted in the discovery of seven graves and two offering trenches (fig. 6.5) (Stais 1890a, b). The tumulus must have been erected to cover grave Δ and the earlier burials, A, B, Γ. The graves did not contain any offerings other than ash remains. The first trench was detected in association with cremation burial A and revealed ashes, bird bones and the burned fragments of a black-figure lekane and a black-glazed olpe (Alexandridou 2011, 89). According to the excavator, the vessels were intentionally broken and the sherds were placed with care within one of the two channels without any missing fragments. The second channel might have received liquid offerings in a form of a libation (Stais 1890b, 321).

The second trench was notably long and was situated at the northwest edge of the tumulus, without being covered by it. A skyphos-krater of the last quarter of the seventh century was the earliest find, followed by four lekanai, a chalice, a skyphos and a loutrophoros-amphora spanning the first quarter of the sixth century (Alexandridou 2011, 89). Although they could not be entirely reconstructed—some fragments were missing—they were also claimed to have been intentionally broken (Stais 1890b, 322). While one lekane was found intact, it is interesting that the skyphos-krater, which must have been the first to have been broken into the trench, was not burned.

Two trenches were detected in association with the tumulus excavated at the site of Soros in Marathon in 1890–1891, which had been interpreted already by Stais as the tumulus of the Athenians, an identification based on the size, the position of the tumulus, but more importantly, the discovery of an ash layer with a number of well-dated early fifth-century black-figure lekythoi, and nowadays accepted by the majority of scholars (fig. 6.6) (Valavanis 2010).

Comparable to the long trench from Vourva, one of the trenches was not covered by the tumulus. Animal bones and sherds (mostly from lekanai) were found in its interior, but due to their poor preservation a detailed description was not possible (Stais 1893, 55). Moreover, the five-meter brick trench, one meter wide, and situated close

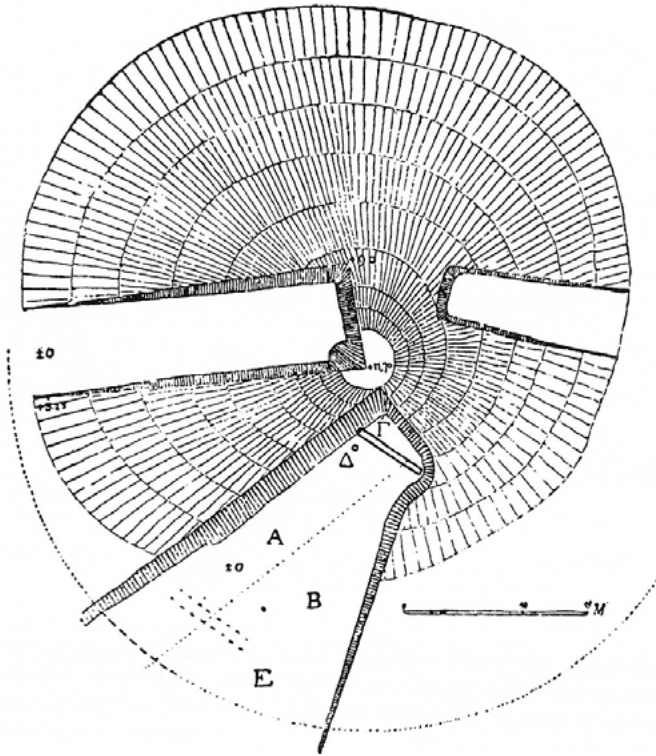


Figure 6.6: Plan of the Marathon tumulus (after Stais 1893, 49).

with the recently excavated *polyandron* on Salaminos Street in Athens Stoupa 2002, 53, 55; Valavanis 2010, 82).

The trench, and in particular the vases, which predate the battle, were reason to question the association of the tumulus with the battle of Marathon (Mingazzini 1974–1975; Mersch 1995; Hsu 2008). Taking into account the Vourva evidence, Stais interpreted the trench vases as the remains of the *perideipnon*, a large family banquet which must have taken place the day of the burial and before the erection of the tumulus (Stais 1893, 53–54), maintaining that the early black-figure vessels must have continued to be produced even after the introduction of the red-figure technique (Stais 1893, 56), while according to Petrakos they represent relics offered in haste by the families (Petrakos 1995, 24). In any case, the vessels have been seen as the result of a single depositional event, as offerings to the dead, and lacking any specific symptomatic connotations (Kistler 1998, 30; Sabetai 2009, 298–299; Valavanis 2010, 85). The trench and its finds have been interpreted as a revival of old Attic funerary customs: in Archaic private tumuli in the countryside, fallen warriors evidently received a public funerary treatment, also integrating elements of a private character, with the trench

rituals (and the vases associated with them) connected to the relatives of the deceased or the inhabitants of the neighboring area (Valavanis 2010, 85–87).

The problem of the earlier vases, however, whose state of preservation and context are compatible with early Archaic trench customs, does not seem to have been satisfactorily resolved. The insistence of a number of scholars on a private Archaic monument which cannot be linked to battle (Mersch 1995), or an Archaic tumulus for the burial of the warriors (Mingazzini 1974–1975) needs further discussion.

The Vari trenches

The North Necropolis of Vari, lying in the southwestern area of the Mesogeia plain in southern Attica, was in use from the early seventh to the fifth century B.C., and can provide the most important funerary evidence from the Attic countryside. A large number of illegally excavated black-figure vases in a fragmentary state were confiscated by the National Museum of Athens, and led to a systematic excavation of the necropolis carried out by Phoivos Stavropoulos, under the directorship of Georgios Oikonomos in 1936, with subsequent seasons in 1937 and 1939 (fig. 6.7) (Alexandridou 2013).

Because of the richness of the ceramic assemblage, the excavation reports, as well as the first publication, which followed almost three decades later, focused on the pottery finds, while their context was largely ignored. Karouzou's *Ta Ayyeía tou Avayupoúvτρος* was dedicated to the examination of the three monumental skyphos-kraters by the Nessos Painter, and a number of black-figure lekanai by the same painter and some of his contemporaries; it did not however elaborate on the shapes' possible role in the funerary practices at the necropolis (Karouzou 1963, 46–49). Because the vases had been looted from the necropolis—thus their original context lost—and the excavation results remained unpublished, Karouzou concluded that the kraters must have served the *perideipnon*, that is, as carriers of the food needed for family banquets. The shape of the lekane was also thought as suitable for such an occasion. Her theory was based on the brief excavation reports, the reference to an ash layer running parallel to the east wall of the necropolis, as well as on the contemporary finds from the Kerameikos necropolis and the Vourva tumulus (Karouzou 1963, 47–49).

The excavation results, which could throw some light on the funerary practices and the burial finds, were unfortunately never published in final form, and any attempt to approach the necropolis can only be based on the archaeological reports (Karo 1936, 123–125; Lemerle 1936, 460; 1937, 451; Riemann 1937, 121–124; Walter 1940, 175–178.). Recent access to the excavation diary and a manuscript by the excavator (today in the archives of the Athens Archaeological Society) form the dataset for understanding the excavation results, and allow for a more detailed study and publication of the necropolis (Alexandridou 2013).

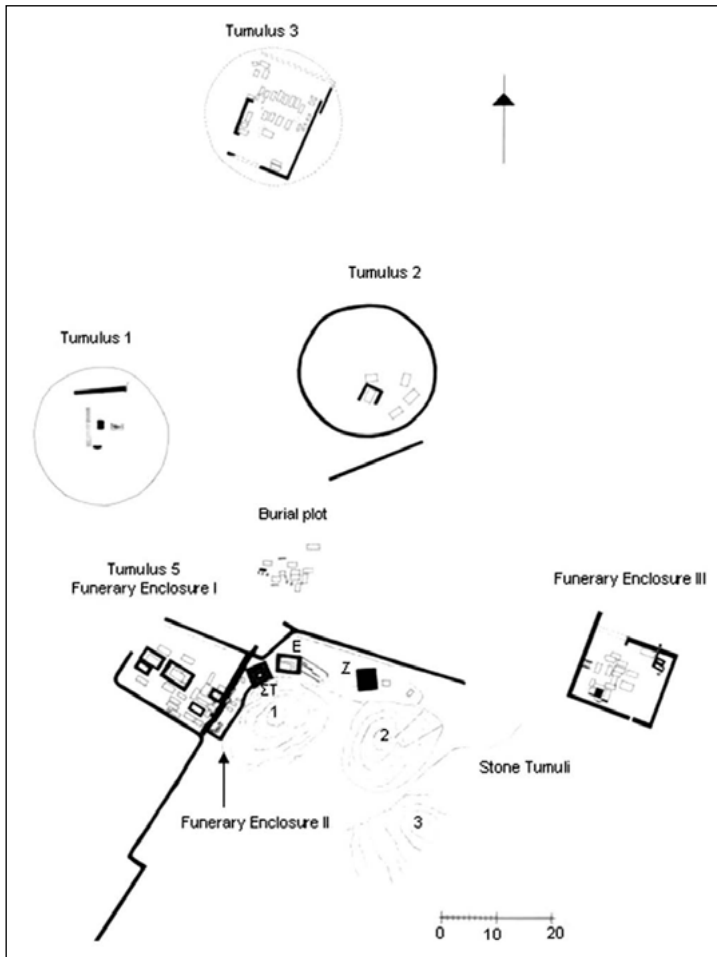


Figure 6.7: Plan of the North Necropolis of Vari. (drawing A. Alexandridou)

Four tumuli, a funerary enclosure and more isolated burials were explored. The earliest burials date to the first quarter of the seventh century. Two offering trenches were detected in relation to particular burials, while many more sacrificial pyres, mostly associated with groups of burials came to light as well. The large tumuli, which reach a diameter of twenty-five meters, the monuments marking many of the graves, as well as the elaborate finds, suggest that this necropolis was the burying place of elite members of the local community if not of its ruling class.

It is interesting that although in his diary and manuscript Stavropoulos provided detailed lists of the excavated vases in many instances, he did not refrain from commenting on the burial treatment of the deceased, attempting in some cases to generate conclusions on their social status. In contrast to the interest that the vases

attracted mostly as *objets d'art*, Stavropoulos himself provided a balanced analysis, with the finds always presented and discussed in close association with their funerary context.

The earliest offering trench was found in association with an adult inhumation burial covered by the largest tumulus of the necropolis, tumulus I. The joining fragments, which came to light during its exploration, confirmed the provenance of the large group of shapes acquired by the National Museum.

The offering trench, with a north-south orientation, was very long, reaching a length of fourteen meters. Its northern part did not contain evidence of burning, while the central area was largely destroyed with only the burned layer of the soil being preserved. Fourteen intentionally broken vessels and a pair of bronze earrings were discovered inside the trench. Drinking, pouring, serving, and oil dispensing shapes were represented, many of which were products of the local workshops and date to the late first quarter of the sixth century.

A sacrificial pyre, running parallel to the west side of the long mud-brick trench was also found. The pyre contained charcoal, ashes and small bones of birds and animals, as well as nine partly burned vessels in fragmentary state, set in a row some distance from each other. According to the excavator, two large decorated pithoi, two pyre plates, three lekanai, two pyxides or lekanidai came to light. An iron knife was placed next to one of the pyre plates. Stavropoulos dated them between 570 and 550 B.C.

The vessels recovered within the long trench, as well as those illegally excavated, point to two different funerary ceremonies, as also indicated by their condition and chronology. Although the exact context of the confiscated vases cannot be securely determined, it is possible that they had been removed from the destroyed central part of the trench, a point also suggested by the excavator.

The first group of vessels, which has attracted scholarly attention, because of the range of shapes and quality of decoration, range in date from the early last quarter of the seventh to the late first quarter of the sixth century. They comprise the most elaborate trench finds in all of late seventh- and early sixth-century Attica. Some are of large dimensions and bear rich iconography. Their shapes, decoration, and the painters or workshops to which they can be attributed point to special commissions destined to serve this particular funerary occasion (Alexandridou 2008).

They do not, however, bear evidence of secondary burning as one would expect, suggesting that they were used during a ritual with no use of fire. Moreover, the forms are not so obviously linked to the sympotic character of the ceremony as known from the Kerameikos. The large mixing shapes, the column-krater and the skyphos-kraters, are absent from contemporary Attic trench contexts. That is also the case of the large neck-amphorae, the louteria and the lekanai. On the other hand, drinking, dining, and pouring vessels are completely absent. The quality of the firing and glaze does not preclude actual use, with the vases containing solid or liquid contents, which could have been offered to the deceased. The spout of the louteria may be indicative of use for libations. (Alexandridou 2009, 476–478; 2011, 34–36).

It is tempting to suggest a deliberate destruction of the shapes, judging from their fragmentary state and to reconstruct a funerary ceremony, during which these elaborate vessels were broken on the spot, with their contents running over the trench, as offerings to the deceased. On the other hand, the excavated shapes are of unusual character. They are less elaborate, mostly of small dimensions and they were found burned. Their forms adapted to the sympotic character of the trench ritual, as described above.

If the suggested chronology for the nine vessels is to be accepted, the chronological span of the finds from the trench and the pyre, suggesting use down to the middle of the sixth century, points to the development of a funerary cult associated with an individual of special importance. The funerary treatment of the deceased is peculiar, adding to the uniqueness of this burial; instead of being primarily cremated, as dictated by the contemporary burial practices, he was buried in a large shaft grave covered by a layer of stones. The excavator reports parts of an animal skeleton next to the grave and some broken vases with linear decoration.

The second trench was found in association with an early sixth-century adult inhumation marked by a grave construction (Grave 25). A number of Attic and Corinthian vessels of a variety of forms, including eating, pouring and carrying forms, were found burned and broken over the trench (Alexandridou 2011, 36–37, 87). The earliest find, a lekane, dates to the last quarter of the seventh century, while the rest span the first decades of the sixth century.

The trench presents a number of peculiarities. It was deeper, and composed of four, rather than two channels. More important is that it was not dug a great distance from the grave, but attached to its eastern side. It is therefore possible that some of the discovered vessels not only served as symbols of a funerary banquet, but might have had an actual use, as containers for libations meant to be offered directly to the deceased through the trench, after being intentionally smashed. Even if it was the destruction of the trench and the offerings that formed the focal point of the ritual (Houby-Nielsen 1996, 46), the position of the trench in close association with the grave, and the choice of inhumation rather than cremation, emphasize the importance of the deceased.

The combination of offering trenches with adult inhumations in this necropolis is of special interest. As already discussed, beginning in the early seventh century, adults were primarily cremated, while inhumations are almost absent. Moreover, trenches were always combined with cremation burials with only one exception from the Kerameikos (Kübler 1959, cat. no. IX. 9, 18–21). In the case of the North Necropolis of Vari, where primary cremation continues to be employed for adults until late in the fifth century, the discovery of inhumed adults is even more striking, raising questions about their identity and social status.

Trenches from other Attic sites

Offering trenches have been recovered in association with two tumuli excavated in Anavyssos and Palaia Phokaia.¹ The first was detected in association with a large tumulus that covered three Geometric burials, and on an upper level, thirty-four cremations and four children's burials urns, dating to the seventh- and sixth-century (O. Kakavogianni, *AD* 39, 1984, *Χρονικά*, B', 43–45). The trench had been partly destroyed by later burials, but was clearly divided into three parts. The few finds—a round aryballos, parts of a skyphos-krater and a kotyle—dating to around 600–590 B.C., seem to reflect the Kerameikos situation, by which time the custom was in decline and fewer shapes, often limited to Corinthian, are found. According to the excavator, more examples must have existed.

Almost half of a large tumulus (ca. thirty meters in diameter) covered forty-four burials, with a date range from the middle of the eighth to the end of the sixth century, was discovered at Palaia Phokaia (O. Kakavogianni, *AD* 42, 1987, *Χρονικά*, B1, 96–97). The trench, disturbed by later burials, was preserved only to a length of two meters. It (like Grave 25, above) was not dug a great distance from the grave, but located in the southern part of its interior. A few bones and fragments of clay figurines were found, but no pottery. Protoattic vessels, however, were placed together with the remains of a cremation within a small deep pit opened inside the grave—the material having been removed from a larger pit where the primary cremation was conducted. It is interesting to note that children's bones are also reported among the pyre remains. Although broken, the vases were not burned.

In the case of the Anavyssos burial, the purpose of the trench is not clear, since no pottery was found in association with it. The placement of figurines is unique, since comparable finds are known only from sacrificial pyres, and these are mostly earlier in date. The offerings, however, were smashed inside the pit where the cremated remains were finally deposited. If the skeletal remains have been correctly identified, then Anavyssos preserves the only known case of a trench linked to a child burial. The use of cremation for non-adults was very rare in Attica, and cremation of newborns or infants was extremely rare (Kurtz and Boardman 1971, 55, 71–72; Haentjens 1999), while only few adolescents are known (Schlörb-Vierneisel 1966–1967, 14, no.23, hS 181; 32, no.54, hS 170; 40, no.79, hS 151; Brouskari 1980: graves G, Z and I). If the material and succession of the funerary rituals have been correctly identified and interpreted, then the burial may belong to a boy, who despite his young age, received a funerary treatment dictated by his social class.

¹ I would like to thank Nikolaos Petrochilos, responsible for the final publication of the material from these excavations, for sharing with me the details concerning these burials and trenches.

Interpretation of the Trench Phenomenon

As shown above, although the excavators of offering trenches attempted to explain the origin and meaning of the trench custom and its funerary features, it was largely the pottery that dominated the direction of research, with the publications of the Vari material being the most characteristic of this treatment. Although a number of early attempts can be noted, it is only in the past two decades that a number of scholars have begun to focus on seventh-century burial customs in Attica, and in particular, the offering trenches, in order to examine the possible social implications of the practice, and to develop a narrative on contemporary social developments in Attica in the period of the rise of the polis.

That said, the first examination of this funerary practice with an emphasis on social organization can be traced back to Wolfgang Helbig in 1900 (Helbig 1900). Through his study, offering trenches attracted the first scholarly attention. Comparing the trenches to Homeric funerary practices, Helbig saw a special post-burial ritual activity, with characteristics of tomb cult, which he associated with ideas of the dead, and concepts of the afterlife developed by the upper social classes of early Archaic Attica (Helbig 1900, 262–270).

Sanne Houby-Nielsen, going well beyond funerary practices, carefully examined the trench rituals in close association with the accompanying pottery assemblages, aiming at reconstructing the ideology embedded in this seventh-century practice, and the apparent social differentiation among the Athenian elite at the time of the rise of the polis (Houby-Nielsen 1992). The trench rituals and their characteristics have been interpreted as expressions of Athenian elite values linked to the Homeric world. This is further supported by the choice of primary cremation for adults, the only funerary practice prevailing in the epics. The destruction of objects was linked directly to the heroic idea of *kterizein*, which served as *sema* or *mnema* (Houby-Nielsen 1992, 355). Concerns of inheritance processes as well as the integrity of households in the community have been thought relevant to the adoption of this practice (Houby-Nielsen 1992, 360–361).

Houby-Nielsen emphasized the sympotic connotations of the ritual with the shapes representing an elaborate banquet set. The appearance and adoption of the trench custom signifies an alteration of elite ideology with a shift from the expression of a warrior's identity to associations of the elite banquet. During the seventh century, the organization of banquets seems to have been more highly valued than the martial identity of individual aristocrats (Houby-Nielsen 1992, 360–361), with connotations of the deceased as *agathos* (Houby-Nielsen 1996, 49).

Retaining her focus on the funerary ritual rather than the pottery itself, some years later she attempted to place the trench phenomenon within the framework of the religious transformations taking place in the Greek world during the late eighth century (Houby-Nielsen 1996). The placement of the trenches in association with graves has been compared to the position of the altar in relation to the temple. Trenches were linked to the *eschara*, the chthonic altar, appropriate for heroes, and the trench finds

to votive assemblages discovered in association with hero cults in Attica. According to Houby-Nielsen, the emergence of the offering trenches was interpreted as a local Attic response to the erection of the first temples, the lack of extra-urban sanctuaries, and the rise of hero cults (Houby-Nielsen 1996, 51–54).

The heroic and cultic dimensions of trench rituals were also given emphasis by Anna Maria D’Onofrio, who examined the important changes observed in the Attic funerary customs during the seventh century and their implications for the development of the Attic polis (D’Onofrio 1993, 149, 165–166).

In his monograph, Kistler attempted to offer the historical and cultural background of the offering trenches linked to the elite burials of Hagia Triada in the Kerameikos (Kistler 1998). His main aim was to place the trench phenomenon, as represented by the Kerameikos evidence, within a broader framework of Attic funerary and burial customs, while exploring its cultural significance, again drawing on the Homeric tradition as a source of inspiration.

Kistler provided an analysis of the banquet ideology as portrayed and developed in Homer, and attempted to associate it with the iconographic transformations observed on the finds from the burials at Hagia Triada. This burial group represents members of an Athenian upper social circle, part of an Ionian cultural koine whose ideals are reflected in the Homeric epic world. His historical perspective on the form of the banquet represented in the Hagia Triada burial group, presented it as an individual case, an exceptional group within the Attic elite (Kistler 1998, 148).

While he rejected the use of the trench for heroizing the deceased, he recognized that by burning elaborate vessels of a particular shape combination, which were meant to replace exotic metal vessels, the deceased and his circle adopted the trappings of a Near Eastern upper social class (such as the *marzeah*), an oriental style banquet, and a new elite social behavior. The growing popularity of the trenches therefore reflects a crisis of principles faced by the Athenian elite in the late eighth century. The transition from warrior to banquet ideology—as already observed by Houby-Nielsen—was placed by Kistler in closer association with the adoption of an orientalizing lifestyle centered on the participation in exotic-style banquets. The emergence of this new elite ideal did not, however, signify the rejection of the polis’ development as claimed by Morris. Kistler questioned the division of the Athenian population into hard and fast social divisions of *agathoi* and *kakoi*, arguing instead for a dominance of this elite group over the rest of the Attic population—the “banausoi” who were excluded from the Hagia Triada burial site (Kistler 1998, 147–161).

The association of trench rituals with the upper social strata of the early Archaic Attic society, and their use of the practice as an advertisement of wealth—with distinctive elements that project a heroic identity and Homeric values—has been recognized by most scholars (D’Onofrio 1993; Whitley 1994b; Houby-Nielsen 1992: 358; 1996: 48–49; Kistler 1998, 152–61).

The gender connotations of the trench custom form another parameter that has been extensively discussed. The sympotic features of the trench ceremony allud-

ing to the heroic world, the shape of the mound markers, mostly a krater, as well as the iconography of the decorated pottery, including chariot processions and battle scenes, led to the identification of the deceased as males (Houby-Nielsen 1992, 357–359; D’Onofrio 1993, 150–151). This identification also included adults whose burials were not associated with any trench ritual, a pattern that may find correlates in the low number of seventh-century graves in Attica, as well as the preference for the adoption of primary cremation (Houby-Nielsen 1992, 359). The absence of rich female burials—a prevalent population in the Attic mortuary record from the Protogeometric period (Whitley 1996)—in combination with the adoption of primary cremation and the trench ceremony, must have limited the physical contact of the participants to the rites, notably of women. This restricted connection with the deceased, his remains and the care for the grave offerings, has led to the assumption of a “masculinization” of the seventh-century Attic mortuary practices (De Polignac 1996, 202–204). Be that as it may, there are no distinctive female graves in seventh-century Attica, though women continue to appear as mourning figures in contemporary iconography (Whitley 1996, 230–231). It is possible that despite the apparent gender differentiation, since the visible archaeological samples seem to belong to members of a male Attic elite group, male and female aristocrats could have been treated comparably (De Polignac 2005, 178–179).

Even though women cannot be easily traced in burials, contemporary vase iconography seems to stress their role in funerary ritual. From the end of the eighth century, funerary scenes indicate a gradual increase in gender differentiation in mourning practices, with women dominating the seventh century iconographic corpus (van Wees 1998, 19–20). Moreover, by the middle of the seventh century, a violent expression of grief with self-mutilating appears among the depictions of females. Women lacerating their faces are depicted on a number of Middle Protoattic vases. And although the number of these scenes decreases, they continue to appear until the early sixth century (van Wees 1998, 23–30). This behavior cannot be irrelevant to the funerary ceremonies suggested by the offering trench and the destruction and burning of the deceased and offerings. Indeed this type of iconography appears on the Protoattic shapes derived from the Kerameikos trenches themselves. Since men must have undertaken the main responsibility for destroying the body, the placement of offerings and burial marker, the lamentation ritual might have been the purview of women.

Offering Trenches and Tomb Cult

The heroic connotations of the trench custom have been discussed by a number of scholars (Houby-Nielsen 1992; D’Onofrio 1993, 149; De Polignac 1996; Whitley 1994b). These funerary features, which seem to allude to the Homeric world, attest to an attempt on the part of the family to place the deceased in a heroic sphere, while the ritual was seen as an expression of tomb cult (Whitley 1994b, 218). However, the evi-

dence from the Kerameikos suggests that the offering trenches do not represent a post-funerary practice (Kistler 1998, 38–41); the vessels are contemporary and their destruction took place parallel to the cremation within the grave before being covered by the tumulus.

In contrast, the trench finds from Vourva, Marathon and in particular the North Necropolis of Vari, cover a wider chronological range (several decades or even centuries) suggesting the possibility of a development of post-funerary ritual that would have been confined to the Attic countryside— and not present in the Kerameikos. In reference to the long trench I, which remained uncovered next to the Vourva tumulus, Stais concluded that the deceased might have received yearly offerings (Stais 1890, 322). Furthermore, the Vourva and Marathon trenches are described as “bothroi,” designed to receive continuous offerings (Kistler 1998, 41–42). In the case of the Marathon tumulus, the offering trench with the pottery predating the battle has been interpreted as the result of efforts to bestow special honors on the heroized dead (Whitley 1994b). For Whitley, the Marathonomachoi might have been perceived as warrior heroes and therefore received an intentional old-fashioned burial treatment alluding to the epic world (Whitley 1994b, 227–230).

The development of some sort of tomb cult for heroized individuals of particular social status and importance has been suggested for the use of trenches in the North Necropolis of Vari (Alexandridou 2008, 66–67; 2009, 481–485; 2011, 35–36). The vases recovered from tumulus I show that the inhumed adult received offerings from the last quarter of the seventh century until the middle of the sixth, if the vases from the sacrificial pyre are also taken into consideration. The chronological span of the vessels from the tumulus has been noted by Stavropoulos and has been linked to the importance of the deceased, interpreted as a local *genarches* (Walter 1940, 176). Although the vases from the offering trench related to the early sixth-century Grave 25 are contemporary, the finds from two pyres excavated in close proximity show that the deceased also attracted offerings for a long period extending from the early sixth to the fifth century (Alexandridou, forthcoming).

This kind of post-funerary cult activity, which seems to have developed in the Attic necropoleis in association with particular individuals, share common features with tomb cults centered on Bronze or Early Iron Age tombs within Attica, as it has been often noted (Whitley 1994b, 223–224; Houby-Nielsen 1996, 53–54; De Polignac 1996, 37; Boehringer 2001, 111). There are a number of striking similarities between the deposit from the dromos of the Menidi tholos tomb and Vari tumulus I (Alexandridou 2009, 483; 2011, 37).

Unlike in the Bronze and Iron Age contexts, however, the deceased of the Vari necropolis do not belong to the distant past, but to the recent memory of the dedicants. The special burial treatment of the two adults, who have been inhumed rather than cremated with an offering trench attached to their burials, as well as their elaborate associated finds, point to important personalities of the local community who were not simply members of the local elite, but must have played a vital role in the life

of the community, possibly being highly respected members of the local ruling class. The development of this sort of tomb cult suggests that soon after death they might have been adopted as ancestors and venerated.

The reasons lying behind this adopted funerary behavior by the elite residing in the Attic countryside, and reminiscent of ancestor cults at Bronze Age tombs, are worth examining. Ancestor cults were seen in relation to land claims (Snodgrass 1982, 89–105), and in the case of Attica in particular, they have been interpreted as a reaction of the old settled communities to the foundation of new small settlements in the vicinity (Whitley 1988, 177–178). Even if conflicts over land ownership cannot be securely claimed in the case of Vourva and Vari, the construction of these impressive tumuli, which stood as important landmarks, visible from considerable distances, must have expressed the interests of wealthy local families, who controlled wide areas of neighboring land. It is therefore probably not accidental that most of these Attic tumuli are found along ancient roads.

The insistence on this funerary practice for a much longer period after its abandonment in the Kerameikos, as is evidently the case of Vari, may be interpreted as an expression of conservatism on the part of the local elite. The elaboration of a post-funerary cult around recently deceased adults or family groups—that is, treated as ancestors with rituals comparable to prehistoric anonymous heroes—may also be seen as a practice emphasizing constructed autochthony and maintaining the groups' individual identity and autonomy from the polis.

Conclusions

The shift of the scholarly focus from the artistic value of objects, the pottery recovered in Attic trenches, to their context, the offering trenches themselves, their features and the funerary rituals, provides interesting insights into the contemporary social history of Attica, during a period coinciding with the early development of the polis.

The acquisition of specifically commissioned fine decorated pottery, which was, for the most part, destined to be burned and destroyed, strongly suggests a practice of ritual rationing in the production, distribution and consumption of certain vessel types by a local elite (Whitley 1994a). The elaborateness of the offerings in combination with the special features of the trench ceremonies, and the overall funerary procedure are evidence of an Attic upper class, which needed to be differentiated, while highlighting its power and wealth through a funerary ritual with sympotic, epic and exotic connotations.

The origins of the practice and the social requirements may be sought in the Late Geometric II burial evidence, which shows an increase in burials, followed by the adoption of inhumation for the adult population. Moreover, grave offerings are fewer and more modest. The higher mortuary visibility, with larger percentages of the adult

population participating in formal funerary practices, has been associated with the emergence of the polis and a radical social reorganization, which put an end to the restricted use of burial rites only by the Attic elite (Morris 1987). While this model has been challenged (Osborne 1989, 315; Humphreys 1990; Houby-Nielsen 1995), it has been effectively argued that the observed increase in the number of Late Geometric II burials, in combination with the variation in burial practices may simply indicate that members of the lower social classes had begun to follow rites reserved until then only for the aristocrats (Laughy 2010, 49–50). The appearance of a large number of late eighth-century burials in the Attic countryside is a further hint for the existence of wealthy non-aristocrats, who owed their high financial status to the exploitation of the countryside (Laughy 2010, 31–35, 59).

The appearance of the first trenches by the end of the eighth century may be interpreted as an attempt on the part of the elite to differentiate themselves from the rest of the population. In this case, the seventh century witnessed again the material visibility of the wealthy in the mortuary record, with the total number of the archaeologically visible burials significantly dropping. Despite the observed local variations, it seems that the trench ceremonies served as an important mortuary expression of the elite, attested all over Attica, which allowed dominant Attic families to advertise and stabilize their social position and role. Outside the Kerameikos, the trenches of the Attic countryside became the setting for funerary veneration for a number of deceased, who have been “heroized” and therefore specially honored as important ancestors.

In the Kerameikos, the trench custom was already in decline in the late seventh century, as indicated by the number and the quality of the offerings. It was finally abandoned around 560 B.C. At the same time, offerings and, in particular, lekythoi, become the main burial goods (Houby-Nielsen 1995, 166–168). The last quarter of the fifth century, and especially in the early fourth, there was a revival of the funerary banquet service, which by that time acquired different connotations, pointed to civic virtues (Houby-Nielsen 1996, 48–51; 1998).

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Anna Lagia

7 The Potential and Limitations of Bioarchaeological Investigations in Classical Contexts in Greece: An Example from the Polis of Athens

Nuanced interpretations of ancient life ways depend on an appreciation of the subtleties inherent in the archeological record. While excavatory projects continue, these are infrequently guided by the integrative research strategies that lead to a contextually sensitive bioarchaeology. (Buikstra 2006c, 413).

Abstract: Bioarchaeological research in the classical Greek world has to confront previously excavated cemetery assemblages. Unlike prehistoric contexts in which multidisciplinary teams routinely form part of the excavation from the initial development of the research design, participation of a bioarchaeologist at all stages of the excavation and analysis of a classical context is rare. Hence, mortuary analyses most often deal with assemblages shaped by constraints of time and funding; expertise of the excavators; and ultimately curation conditions. The latter factor, curation, has defined the quantity and quality of material preserved through various stages from recovery to storage—that is, from the cemetery context to the curation site. Although perennial excavations are more likely to employ multidisciplinary teams during the excavation and analysis stages, their emphasis on skeletal remains has varied widely. Salvage excavations have also provided significant skeletal assemblages, particularly in the last two decades of the twentieth century. The cemeteries presented in this paper bear evidence of the two main traditions of cemetery excavation and illustrate the strengths and pitfalls of each. Using developments from the theoretical and analytical fields, this paper demonstrates how biases of excavation and curation strategies can be overcome to address questions of broader significance concerning the society and economy of the Greek city.

Introduction

The call for integrated approaches to mortuary contexts, incorporating “the active participation of archaeology, physical anthropology, and other scientists in all phases of research design” (Goldstein 2006, 386) has a history spanning only thirty years (Buikstra 2006b). In this paper, the potential and limitations of bioarchaeological investigations in classical contexts in Greece are discussed, and an example from the polis of Athens is used to address questions of economic and social history.

Recent appraisals of the current state of the field and current directions in classical archaeology, ancient history, and biological anthropology reveal important similarities in the pursuits of the three fields, and rather broad areas where they might find common ground. In particular, reviews addressing past and present discourses in classical archaeology and biological anthropology display significant parallels that

relate not only to an effort to disengage from parts of their disciplinary histories and academic legacies, but also a determination to find their place within world archaeology and anthropology (Morris, ed., 1994; Morris 2004a; Terrenato 2002; Turner, Toebbe, and Armelagos 2006; Goodman 2006; Osborne and Alcock 2012; Lindee and Ventura Santos 2012; Vêran 2012). In between these two fields, the study of ancient history appears well positioned to help bridge disciplinary divides (Morris 2004a; 2004b; 2005; Scheidel 2010; Ober 2010).

At the same time, the extreme technical specialization in biological anthropology, threatening to alienate the study of human skeletal remains from their cultural dimension, has rendered the renewal of connections between biological anthropology and anthropology in general, more pressing than ever (Goldstein 2006, 377–9; Goodman 2006, 226–228). The cultural dimension, which in bioarchaeology and (classical) archaeology is generally translated as “context,” is the most fundamental component for more nuanced interpretations of past human behaviors and ancient life ways (Morris 1992, 69; Buikstra 2006c, 413; Gowland and Knüsel 2006, x; Osborne and Alcock 2012, 5).

This paper seeks to highlight the potential of bioarchaeology in the field of classical archaeology. Bioarchaeology’s development as a discipline has accelerated in the last three decades, in part as a result of the rigorous interrogation of its methods and interpretative frameworks, but also because of the very existence of skeletal material through the restitution of collections that form its core (reviews in Wright and Yoder 2003; Buikstra 2006c; Milner, Wood, and Boldsen 2008; Zuckerman and Armelagos 2011; Kakaliouras 2011). A parallel situation, focused more on the aims and scope of the discipline and less on its methods and objects, describes recent developments in classical archaeology in general (Morris, ed., 1994; Morris 2004a; Terrenato 2002; Osborne and Alcock 2012).

Given that the development of a bioarchaeological approach can trace part of its history to the work of one of the field’s pioneers in Greece in the middle of the twentieth century (Angel 1942a; 1942b; 1945; 1946a; 1946b; 1953; Buikstra 1990; Roberts et al. 2005, 40–45; Buikstra and Prevedorou 2012), it seems appropriate to discuss the potential and limitations of recent theoretical and methodological developments in classical contexts in Greece.

The Study of Human Skeletal Remains in Greece

The field of anthropology dealing with the study of human skeletal remains in Greece came about in the late nineteenth century, involving practitioners of medical and biological sciences (Grmek 1983, 52–56; Roberts et al. 2005; MacKinnon 2007; Trubeta 2007; Lagia, Papathanasiou, and Triantaphyllou 2014). Absorbed initially in the investigation of models of the origin of the local population, anthropologists were

largely committed to typological analyses of prehistoric crania and, to a lesser extent, the study of pathologies. Meanwhile craniometric analyses at a number of sites were recording a remarkable phenotypic variability within population samples (e.g., Breiting 1939; Angel 1942a), superseding any deceptive ideas on monogenesis (cf. Cook 2006, 69–71).

Throughout the twentieth century, an important number of local and foreign scholars participated in the study of human skeletal remains from a multitude of prehistoric and, less often, historical-period excavations preparing the groundwork for more systematic, holistic, and contextual approaches to the study of human skeletal remains. The fusion of biology and culture was to become the center of inquiries from the 1990s onwards when the field was increasingly dominated by scholars with a background in archaeology and anthropology. As a result, the methodological and interpretative advancements in the study of human skeletal remains over the past three decades (overviews in Wright and Yoder 2003; Knudson and Stojanowski 2008; Zuckerman and Armelagos 2011); and their application in a multitude of biocultural contexts (e.g. Goodman and Leatherman, eds., 1998; Steckel and Rose, eds., 2002; Knudson and Stojanowski, eds., 2009; Perry, ed., 2012); the establishment of the field of bioarchaeology as a distinct discipline (Larsen 1997; Buikstra and Beck 2006); and the transformative power of graduate education (Roberts 2006) have offered a radically new environment for biocultural studies in Greece (Buikstra and Lagia 2009).

Although institutionally, the study of human skeletal remains still resides in biomedical departments in Greece, albeit with a different orientation than in the past, these developments have spurred the growth of intellectual links with local departments of archaeology and history, and gradually the incorporation of bioarchaeological approaches to their curricula (Roberts et al. 2005, 45–48; Lagia, Papathanasiou, and Triantaphyllou 2014, 106–109). Subsequently, an increasing number of students are being exposed to the methods and theories of bioarchaeology. The majority of these, nevertheless, find their way to the excavation and analysis of prehistoric contexts where multidisciplinary research teams rather than independent investigators now regularly set the agenda. This kind of multidisciplinary approach is still developing in classical archaeology, where specialists in the *anthropologie du terrain* (Duday 2006), like other specialists, are frequently absent from the field.

Consequently, human skeletal analysts interested in working with classical contexts find themselves largely confronted with already excavated skeletal assemblages. In close collaboration with the excavators, they often need to assume the detective work of clarifying the conditions of recovery and formation processes—including taphonomic factors, excavation strategies and curation histories—that have generated and may continue to shape the osteological assemblages in question. Accessibility to contextual information from field notes, excavation archives, photographic documentation and past publications is therefore of paramount importance for the quality of investigations. The greatest toll in the case of incomplete excavation records

is levied on reconstructing “the cultural ecology” of past peoples (Walker 2008, 12) and investigating the behavioral and social correlates of mortuary practices (Buikstra 2006a, 195; Gowland and Knüsel 2006, x–xiii).

Formation Processes of Mortuary Contexts and Skeletal Assemblages

The discourse initiated at the end of the 1980s concerning the importance of formation processes shaping the archaeological record (Schiffer 1987) assumed a remarkable sophistication in the study of mortuary contexts (Duday 2006; Rakita et al. 2005; Gowland and Knüsel 2006; Stodder 2008; Weiss-Krijeci 2011). Variable factors, it is now clear, affect the formation not only of mortuary deposits but of the excavation overall, transforming and creating the archaeological context (Lucas 2001; Hamilakis 2007; Shanks 2007; Stroulia and Sutton, eds., 2010). These factors begin with the initial research design, which determines the location, area, intensity, and interdisciplinary character of the excavation, and ultimately shapes the site itself, the character of the material record, and quality of data.

The formation of skeletal assemblages resembles to some extent the selectivity that characterized early excavations that focused on the notionally “prominent” or “exceptional.” A critical difference, nevertheless, concerns the treatment of human skeletal remains during excavation as an artifact or find category. Not infrequently in the past, human remains have been either summarily disregarded during excavation, or inadequately collected and curated giving “the impression that the deceased was placed as an offering to a ceramic vessel, rather the other way round” (Gowland and Knüsel 2006, xi). Although this situation appears to be changing in recent years, with more frequent employment of anthropological methods and techniques in the field, the handling of the remains and their conditions of preservation continue to play the most pivotal role in the formation of the dataset.

A brief appraisal of the collaborations between anthropologists and archaeologists in different sites throughout the twentieth century reveals an imbalance between the number of graves and contexts that were excavated and those that were studied anthropologically. In the early excavations this unevenness can be partially attributed to the limited time and authority that scholars had, in addition to the novelty of including anthropologists in the field. In the introduction to his 1942 dissertation, Larry Angel highlighted problems frequently encountered in conducting anthropological research in Greece. These included generally poor skeletal preservation; lack of a registry of existing collections and ensuing difficulties in accessibility; limited participation of specialists in the recovery of human skeletal remains; delays in accessibility related to bureaucracy; and inadequate pre-fieldwork preparation of the researcher in terms of recovery methods to be used.

In what follows, I provide an account of the most important factors determining the scope and quality of anthropological investigations in Greece today including issues surrounding legislation and protection of human skeletal remains. Many of these parameters reflect wide-reaching attitudes toward the treatment and study of human skeletal remains that are not specific to Greece; thus their resolution could benefit from relevant experience in other contexts.

Milner, Wood, and Boldsen (2008, 571–574) draw attention to the lengthy process that differentiates a living population from a cemetery assemblage or a skeletal collection in a museum or *apotheke*. They schematically describe this “long and tortuous process” with a sequence involving five complex transitions: Living → Dead → Buried → Preserved → Found → Saved (Milner, Wood, and Boldsen 2008, 571). These transitions relate not only to the structure of the assemblage in terms of age at death, sex, socioeconomic and other differentials, but also to factors related to population epidemiology, such as heterogeneity in frailty and risks of death. According to these scholars, the first transition—that is, from living to dead—plays the most important role in the formation of a skeletal assemblage, and needs to be addressed through the assessment of the extent and systematic character of an excavation; the demographic and pathologic profiles of a skeletal assemblage; and the employment of multiple lines of investigation to avert linear correlations between the occurrence of pathologies in an assemblage and the state of health of the living population.

Awareness of the extraordinary variability of the funerary cycle, and the extra- and post-funerary processes affecting the formation of a mortuary deposit (Weiss-Krejci 2011), have rendered the investigation of the second transition (dead → buried) one of the most sophisticated in funerary archaeology (Rakita et al. 2005). The choice of who is buried, where and how, and the multiple possibilities that each option involves, urge the detailed examination of the skeletal remains in their contexts. Many studies demonstrate how mortuary practices can shape and be shaped by the choice of bones entering a deposit depending on its primary, secondary or even tertiary character in multi-stage funerary programs (Andrews and Bello 2006; Bello and Andrews 2006; Weiss-Krejci 2011).

For example, rituals involving differential body treatment at the time of death, as is known during the widespread adoption of cremation in the Early Iron Age in Greece, may include several funerary and post-funerary stages. To inform our understanding of burial practice in such multistage contexts, the close investigation of contextual parameters and osseous characteristics is essential. Primary cremation areas that also served as burials bear distinctly different osseous and contextual characteristics from those of pyres and secondary deposits, such as urned and unurned cremations, or ash dumps (Musgrave 1980; Liston 1993; 2007a; Lagia et al. 2013). The excavator’s selection, therefore, of a quantity of (cremated) remains to be curated, and a researcher’s selection of the sample of the remains to be studied, may obscure aspects of multistage mortuary practices in which parts of a skeleton may be differently redeposited. While the problem of differentiating primary from secondary cremation practices has

been addressed archaeologically (Stambolides 2001), integrated anthropological and archeological investigations particularly in classical contexts are pending.

Likewise, the appreciation of complex mortuary deposits such as those of the Roman and Byzantine periods, that involve manifold funerary and extra-funerary activities relating to multiple inhumations and cremations over several generations, in addition to extra-funerary activities such as ritual and looting, benefit tremendously from the application of methods and techniques of forensic archaeology (Ubelaker and Rife 2007; 2008), as well as an appraisal of their social and cultural settings (Gregoropoulos 2004).

Mortuary practices frequently involve differential treatment of segments of a population, as is for example known for the burial of juveniles within settlements in the Early Iron Age (Gauss and Ruppenstein 1998; Mazarakis Ainain 2010), or their disposal in exceptional contexts in the Hellenistic period (Liston 2007b; Bourbou and Themelis 2010). In such cases the demographic and paleopathologic profiles of an assemblage, combined with information on its period of use, may be invaluable to interpretation. An atypical demographic structure with scarce or excessive numbers of juveniles, rather than taken to reflect mortality or fertility levels, may actually mirror differential mortuary practices (Morris 1992, 80) or excavation choices (Jackes 2011, 113). In the case of the 449 fetuses and infants found in a second-century B.C. well from the Athenian Agora, extensive evidence of pathologies among the remains, in addition to the presence of non-viable fetuses suggested that, during its narrow period of use, the well served “as the place of deposition for premature and stillborn infants, infants who died prior to formal inclusion within the family, and infants who may have been killed or exposed because of visible defects at birth” (Liston 2007b).

Classical archaeology’s largest infant cemetery, excavated in the past decade on the island of Astypalaia (Hillson 2009), forms an unusual and interesting puzzle in this respect. Over 2,700 pot burials of fetuses, infants and young children—conspicuous by their absence as a demographic group worldwide (Paine 1997)—dating mostly to the Late Archaic-Early Classical periods, were recovered in eight excavation seasons (Hillson 2009, 138; Clement, Hillson and Michalaki-Kollia 2009, 17–18). While the inclusion of large numbers of infant pot burials in the cemeteries, sometimes in reserved areas, is a well-known practice in the Greek speaking world for this period (Morris 1992, 78–81; Lagia 2007a, 298–299), the sheer size of this cemetery and its exclusive use for the burial of these age groups is unprecedented. Does the cemetery comprise an exceptional context, or is it the result of the first systematic excavation of a baby cemetery? Not far from this site, a contemporaneous cemetery with burials of adults and juveniles, perhaps more typical for the period, points to an emphatically different use of the former. While the preservation of the infant remains was attributed to their containers that “protected the bones and kept them together” (Hillson 2009, 138), the extremely young ages of some of the infants, ranging from twenty-four week fetuses to three year olds (Clement, Hillson and Michalaki-Kollia 2009, 20), challenge

interpretations relating to their “fragile” nature. Does the presence of “amphoras of varying forms to accommodate the bodies suggest they came from many parts of the Greek world” (Hillson 2009, 139)? Such a possibility, to be tested through various analytical techniques (Clement, Hillson and Michalaki-Kollia 2009, 21), could completely transform our commonly held ideas about “indifference” towards the death of infants in antiquity.

The transition from “buried” to “preserved” conditions primarily involves processes taking place in the burial environment. A multiplicity of factors such as chemical degradation due to soil composition and grave furniture, temperature and humidity fluctuations, weathering and the activity of scavengers, can influence the survival and post-depositional movement of bones (Stodder 2008). Moreover, inherent factors relating to the thickness and size of individual bones and their plasticity throughout the lifecycle may affect their susceptibility to environmental factors and distort impressions about sample biases and cultural activities (Bello and Andrews 2006). The harshness with which the soil in Greece often affects preservation has been known since Larry Angel’s first involvement in excavations from diverse sites (Angel 1942a, 25). Angel later reported that in Greece, “less than 1/5 of graves produce useable skeletons; this is particularly true in the red acid limestone-derived soil of much of Attica, although at Eleusis (and the Athenian Agora) the schist derived soil is a little less destructive” (Angel 1975, 301). While significant variations in preservation are known even among adjacent graves in a cemetery betraying the complex character of preservation, environmental conditions remain among the most pivotal factors at numerous sites (e.g. Grammenos and Triantaphyllou 2004), including those where particular attention was invested in the excavation and collection of skeletal remains.

The influence of a wide array of post-depositional factors, ranging from the architecture of the grave or tomb and the presence of microenvironments within the grave, to commingling and fragmentation due to multiple funerary uses and extra-funerary events (Ubelaker and Rife 2009; Rife 2012, 11–17), underscore the importance of having specialized and experienced staff, sensitive to the recognition and excavation of skeletal remains in the field during the excavation stage. Distinguishing, for example, the synchronous burial of several individuals (Lagia 2002; Triantaphyllou and Bessios 2005; Bourbou and Niniou-Kindeli 2009) from the successive use of a grave to accommodate bodies over lengthy periods of time requires knowledge on the desiccation sequence of the most unstable anatomical areas, in addition to details of the burial environment and the history of excavations at a site. The widely held impression that the bones of newborns and the elderly are less well preserved than those of young adults, while true in extreme environments (Buikstra 1997, 370), often conflicts with finds from systematic excavations as mentioned above. The application of a rigorous methodology and the attention and time invested on the well-known laborious excavation of mortuary deposits are critical to the quality of osseous and contextual information that will be generated.

The participation of specialists in multidisciplinary excavation teams is now a standard procedure in prehistoric and protohistoric excavations of foreign schools in Greece (e.g. Liston 1993; Cavannagh et al., 2007; Wright et al. 2008; Eaby 2010), university excavations (e.g. Aggelarakis 2005), and occasionally excavations conducted by the Greek Archaeological Service (e.g. Triantaphyllou 2004a; Papathanasiou 2009; Valla et al. 2013).

Systematic excavation of mortuary contexts in classical archaeology has for the most part been slow to take shape, perhaps reflecting the emphasis in the discipline on art history rather than social archaeology. Anthropologists have, however, had an intense, though mostly post-excavation presence in handling material from classical contexts, including notable cremation graves of the classical period and complex Early Iron Age sites (Angel 1945; 1975; 1984; Musgrave 1980; 1990; 1996; 2005; Callaghan, Coldstream, and Musgrave 1981; Bisel 1990; Triantaphyllou 2004b; Milka and Papageorgopoulou 2004; Bourbou 2005; Vanna 2005; 2010; Papagrigorakis et al. 2006; 2011; Lagia 2007a and b; 2014; Vika, Aravantinos, and Richards 2009; Vika 2011; Charlier et al. 2009; Kavadias and Lagia 2009; Musgrave et al. 2010; Lagia et al. 2013). Field participation of specialists in the excavation of classical sites has been nevertheless sporadic (Aggelarakis 1997; 2005; 2010; Lagia 1999; 2000; Triantaphyllou and Bessios 2005; Rife et al. 2007; Clement, Hillson, and Michalaki-Kolia 2009; Bourbou and Niniou-Kindeli 2009; Bourbou 2013), and work has focused more on the periphery than in Athens, one of the densest cemetery areas in Greece where anthropology departments have existed for decades.

A series of practical factors may also affect research outcomes, namely in the procurement of a place to properly store and study human skeletal remains, and to evaluate their contextual associations. Lack of storage and workspace and the prevalence of an object-centered approach may affect the likelihood of all excavated skeletal remains finding their way to the *apotheke* of a research institute, museum, or the local ephorate. In the storeroom, the history of an assemblage does not end (Stodder 2008, 104–5); the conditions of curation and the accessibility, and the frequency of access to collections may continue to affect its condition. Once placed in storage, the management of human skeletal remains complies with the same stringent regulations relating to all archaeological finds. These, nevertheless, apply to their protection throughout all steps of excavation, recovery, study, and curation.

The Treatment of Human Skeletal Remains and Ethical Considerations

The protection and long-term preservation of human skeletal remains is an ethical imperative for anthropologists who consider them “the ‘material memory’ of the people who preceded us” (Walker 2008, 24). Their dual significance, however, as

unique scientific tools and highly symbolic objects viewed in diverse ways by different peoples (Walker 2008, 13–18) requires the consideration of complex and sensitive approaches to their treatment.

The disregard of human skeletal remains from studies of the past has been difficult for modern anthropologists to explain given their tremendous potential as “the most tangible and direct form of evidence for understanding” past life ways (Gowland and Knüsel 2006, ix). All the more difficult to contain has been the dramatic shift in their position when politics of power are at issue (Véran 2012). Given that bioarchaeological investigations crosscut ethical concerns in the biomedical and social sciences, it is not surprising that issues surrounding the treatment of human skeletal remains are constantly “reshaped in response to changing social realities” (Walker 2008, 29).

In Greece the current legislation relating to the administration of human skeletal remains is regulated by the Ministry of Culture and does not differentiate their management from that of other archaeological objects (Eliopoulos et al. 2011; Charalampopoulou 2013). The excavation, recovery, protection and study of human skeletal remains comply with Law 3028/2002 on the “Protection of Antiquities and Cultural Heritage in General” (Government Gazette 153/A´/28.6.2002). The compulsory presence of a specialist during the excavation and recovery of human remains, or in the local ephorates for their curation and study is not stipulated. This lack of regulation has had a significant impact on the quality of the excavated remains, the development of a registry/database with available collections around the country, and adequate infrastructure to house the hundreds of skeletons excavated each year. Resolution of these problems could advance the efficiency of the procedures required for the acquisition of permits to study and sample skeletal remains for the purposes of chemical investigations (www.yppo.gr/files/g_14318.pdf).

The enormous problems faced in the past few decades in several parts of the world concerning the restitution of osteological collections by descendant groups have led to a substantial introspection regarding the ways with which scientists have handled material (Ellison and Goodman, eds. 2006; Henderson 2009). Part of the problem, between academic scientists and the general public, has been attributed to the radically different perspectives between the former, who “handle and study bones on a daily basis,” and the general public, which does not share this experience (Turner, Toebe, and Armelagos 2006, 217).

How does this view apply to the general public and scientific community of modern Greece where reverence towards the grave and integrity of the remains of the deceased forms an integral part of Christian theology (Kontoyiannis 2000), while modern funerary practices include multifaceted rituals involving the exhumation, secondary, and even tertiary treatment and redistribution of skeletal remains (Danforth and Tsiaras 1982)? A first reading of this situation may allow one to deduce that because of this familiarity in viewing and handling skeletal remains, problems related to the excavation and recovery of the bones have been evaded, while excavation practices have not really been perceived as sacrilege towards the ancestral remains.

How can this outlook, however, explain the indifference on the part of the scientists towards the remains during excavation and recovery? Can the “scientific view” lead to behaviors that are detached from any emotional or symbolic meaning “universal to the rest of the world” (Turner, Toebe, and Armelagos 2006, 217–218)? Even when people do not ascribe metaphysical meaning to the presence of dead remains, they usually recognize that they deserve to be treated with care and respect (Scarre 2013, 666).

A current discourse concerning the divide between “those who construct sites and the people who live nearby” explores the chasm between archaeology and its practitioners from the general public (Sutton and Stroulia 2010, 4). Fotiadis (2010, 449) attributes the indifference of the general public to matters archaeological to “the institutional frame that shapes both archaeology and the dispositions of its lay public.” The absence of archaeology in formal education, in addition to legal strictures surrounding antiquities, leave archaeological remains “entirely at the disposal of the state” (Fotiadis 2010, 453). In this framework the apparent indifference towards mortuary remains could also be interpreted as a form of detachment that citizens experience from archaeological finds in their vicinity, rather than an expression of tolerance that is due to familiarity with handling skeletal remains.

Scholars working in the field as in the laboratory, however, are familiar with expressions of concern from the public about the potential disturbance of ancestral remains. During the much publicized excavation of the Macedonian tomb at Amphipolis, artist Kostas Tsoklis openly asked if we have the right to disturb graves by excavating them and thus violating the privacy that their owners or constructors most likely wished to maintain («Κάποτε θα τιμωρηθούμε ως τυμβωρύχοι» 1/10/14 <http://www.protagon.gr/?i=protagon.el.article&id=36706>). Engaged archaeology tells us that contemporary communities may use material remains in their vicinity “in the negotiation and construction of their identity” (Sutton and Stroulia 2010, 5). Moreover, people that may not be “formally affiliated” with a site may express unexpected interest in “bones of modest scientific curiosity” as much as in remains of prominent historical figures (Turner, Toebe, and Armelagos 2006, 217). Engaged archaeology looks for ways that can enrich the archaeological perspective in terms of knowledge and interpretation through the integration of the voice of the scholar, the local citizen and the state (Stroulia and Sutton, eds., 2010). Self-reflective anthropology embarks on bridging different viewpoints on the past seeking an open dialogue and involvement of the concerned groups “in all stages of research, from excavation and cataloguing to storage, analysis, and publication... to make all aspects of skeletal excavation and analysis scientifically rigorous, theoretically relevant and ethically conscious” (Turner, Toebe, and Armelagos 2006, 219).

In Greece, the integration of local perceptions of ancient cemeteries and human skeletal remains could generate new views of the past (Hamilakis 2010), and transform the conditions of excavation and curation, offering bioarchaeology literally a place to exist. Most importantly though, the integration of specialists as active par-

ticipants in the development of approaches towards mortuary contexts rather than passive recipients of excavated skeletal assemblages, can radically transform our understanding of the past, bridge different perspectives, and effectively secure the availability of high quality skeletal collections to future generations.

An Example from the Polis of Athens

Very few culture-periods can offer the same wealth of evidence for shaping historical narratives, as scholars working in classical contexts have at their disposal. This obvious advantage has perhaps worked divisively in the past, isolating different subspecialties from broader investigations. The bioarchaeological approach calls for integrated inquiries in order to appreciate more fully past human behavior. Critical insights into textual sources do not suggest their exclusionary or hierarchical value, but rather a complementary perspective (Buikstra 2000; Perry 2007). The bioarchaeological investigation presented here addresses questions relating to the economic and social history of the city-state of Athens in the period spanning the peak of the polis development in the Classical period to its fragmentation in Imperial Roman times. Two cemeteries from the city of Athens, the Kerameikos and the Plateia Kotzia, representing to some extent different socioeconomic strata but also different excavation histories, were compared in terms of demography, diet, and health in order to evaluate the occurrence of socioeconomic disparities and the way these may have changed through time. Evidence from written sources, archaeological data, and excavation histories, was used to inform an association between cemeteries and socioeconomic status.

The Kerameikos cemetery, located in the area outside the Dipylon and the Sacred Gates, is commonly included in ancient sources mentioning the burial of the war dead and the graves of historically significant political figures (Thucydides II.34.5; Xenophon *Hellenica* II.4.33; Pausanias I.29.3, I.36.3). Archaeological excavations at the site, initiated in 1870 by the Greek Archaeological Society and continuing since 1913 by the German Archaeological Institute, have confirmed the status of the cemetery: “Inscriptions on some of the grave monuments name men or families [for example, of envoys, treasurers and archons] which are either probably or certainly known figures in ancient history...” in addition to “...monuments of unknown well-off citizens and foreigners.” (Knigge 1991, 13). The use of the cemetery for eminent burials is further attested for the Hellenistic and Roman periods (Kübler and Gebauer 1942; Stroszeck 2008). Grave inscriptions, nevertheless, also reveal that people of lower political or social statuses were buried in the cemetery as well (Kovacsóvics 1990, 112). Moreover, graves of ordinary people including hundreds of infant pot burials were present in certain periods (Kübler 1976; Knigge 1976), although their skeletal remains are not available today.

An inscription found in the nineteenth century at the Plateia Kotzia cemetery, associating its location with one of the city's major gates, as well as elaborate graves excavated in the 1960s, suggest that part of this cemetery may have been used by affluent strata (Karagiorga-Stathakopoulou 1988, 101; Zachariadou and Kyriakou 1993, 23). These burials, however, do not survive today for anthropological investigations. Systematic excavations over three years in the mid-1980s, by the 3rd Ephorate of Prehistoric and Classical Antiquities, recovered human remains within modestly furnished graves of limited elaboration (Karagiorga-Stathakopoulou 1988, 101–102). As in the Kerameikos, where earlier excavation priorities led to the curation of a greater number of skeletons from eminent contexts, the excavation histories of the two cemeteries worked in favor of creating an opportunity for comparison of assemblages. Although analysis starts with the premise that the two cemetery samples represent different socioeconomic strata, it tests this assumption by empirical evidence. The objective of investigation was to evaluate the standards of living in terms of diet and health, appraise their distribution in relation to socioeconomic status, age at death and sex, and to assess temporal changes through a multitude of political, socioeconomic and cultural rearrangements that took place from the Classical to Imperial Roman times.

While a pervasive model suggesting improvements in the standards of living in the Greco-Roman world in the period from 800 B.C. to AD 200 is supported by current approaches to economic history, it is clear that local particularities characterize this broad geographical and temporal framework (Morris, Scheidel, and Saller 2007, 11). For the Greek world in particular, it has been argued that the economy was more dynamic than previously thought and followed a larger pattern of cyclical growth and contraction (Morris 2004b; 2005). A multitude of sources suggest that Classical Greece represents the culmination of growth from the eighth century B.C., after a decline in the Early Iron Age. By whatever criteria is used to assess or qualify this growth—housing, mortality, morbidity, trade, food, sanitation or welfare institutions—the Classical period appears more prosperous than many pre-modern societies (Morris 2004b; 2005; Scheidel 2010; Silver 2007; Ober 2010; Kron 2005; 2011). A turning point in this development, however, occurred about 300 B.C. when political rearrangements in the hegemonies of *poleis*, and new equilibria within a much broader realm in the eastern Mediterranean had adverse effects on many Greek city-states.

For Athens in particular, the loss of its hegemony in the fourth century B.C., the contraction of its economic power through the constant Macedonian threat, the recurrent devastation of the Attic hinterland and the relocation of the political and economic interests of the Roman Empire to regions outside “Old Greece,” do not seem to have had a positive effect on its development. Moreover, population rearrangements from hinterland to city and disruptions in the population, already visible in the Hellenistic period, suggest that socioeconomic differences may have become enhanced by the Roman period (Day 1942; Alcock 1993; Cartledge 1997; Habicht 1997). While the scale of such differences may have been smaller in the Greek world in comparison

with other complex societies in Mediterranean history (Morris 2009; Scheidel 2007; Kron 2011), the lack of quantitative evidence regarding the size and economic differentiation of large segments of the population—including women, slaves and foreigners—hinders relevant associations. Bioarchaeology provides the possibility to bridge views on the quality of life of a broader segment of the population than written and archaeological sources allow. Moreover, the combined analysis of biological and cultural parameters (Buikstra 2006b) allows the evaluation of the quality of life within a long temporal framework, particularly in reference to the situation of women and the condition of constituents representing broad socioeconomic strata (Goodman and Leatherman 1998; Steckel and Rose, eds., 2002; Larsen 2006; Steckel 2008).

The evaluation of basic demographic parameters in these two Athenian cemeteries—the representation of different age groups and the number of deceased accommodated in the graves—reveals important temporal correlates. In particular, in the late Classical period, the numbers of infants and young children in the cemeteries is markedly reduced, a well-known Panhellenic phenomenon (Morris 1992, 86) that cannot be easily interpreted by new attitudes towards these age groups (Golden 1997; cf. Houby-Nielsen 1997). While in the late Classical and early Hellenistic periods this trend is maintained, by late Hellenistic and Imperial Roman times, the numbers of infants and young children increase again in the cemeteries, but are now frequently encountered in multiple rather than single graves (Lagia 2007). In these periods, one more change is noticed: while most graves of the Classical and early Hellenistic periods are primarily single, in the late Hellenistic period multiple graves increase, and in Imperial Roman times, it is not uncommon that the number of deceased accommodated in a grave exceeds three individuals (fig. 7.1). The presence of six or eight individuals in a grave, no longer unusual in the Roman period, is utterly lacking from the earlier centuries in Athens (fig. 7.2).

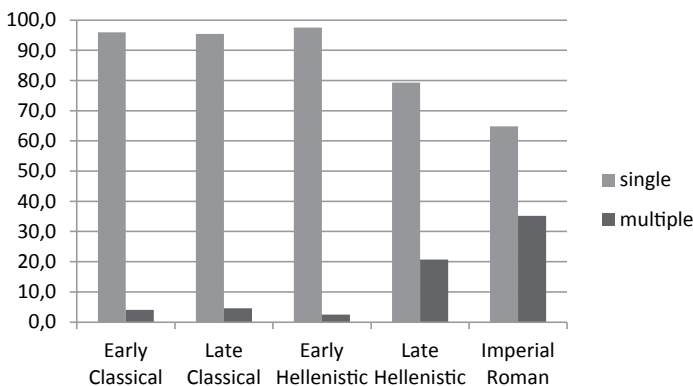


Figure 7.1: The proportion of single vs. multiple graves per chronological subphase at the Kerameikos and Plateia Kotzia cemeteries combined.

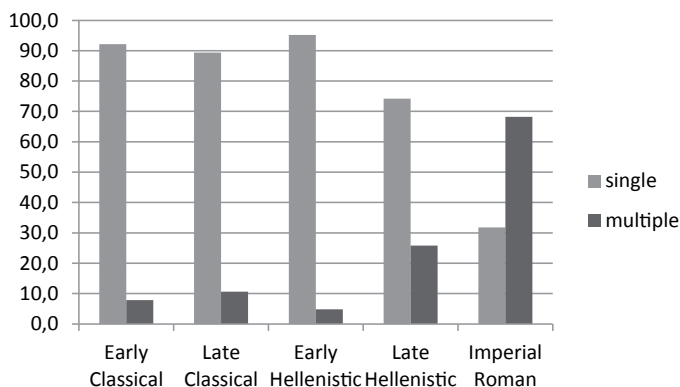


Figure 7.2: The proportion of individuals in single vs. multiple graves per subphase at the Kerameikos and Plateia Kotzia cemeteries combined.

What might have led to the development of this “collectiveness” in mortuary practices, a condition that is certainly not unique in Athens (e.g. Fox 2005; Lagia 1999; 2000; 2002; Vlachoyianni, Lagia and Sabetai-Arditti 2008; Rife 2012)—cultural influences; economic and ideological factors as is known for collegia and columbaria in Rome; or new attitudes towards death and the afterlife? In other contexts such a trend has been linked to an ideology “by which the individual is denied and the collective asserted” (Parker Pearson 2001, 52). The impact of broader political forces in Greece in the last two centuries B.C. and the first two centuries A.D. appears to have resulted in the development of a social and political setting radically different from that of the polis in the Classical and early Hellenistic periods (Alcock 1993, 217–220). Could beliefs developed in this new setting be reflected on mortuary practices in both cemeteries, perhaps no longer of different socioeconomic strata?

The impression of a gradual reduction of disparities between the two cemeteries is heightened by the study of parameters describing conditions of health and diet. An increase is observed in stress indicators in childhood, and a relative reduction in protein input from the Classical to the Imperial Roman periods. In certain cases, this is differently expressed between the sexes and socioeconomic strata. In the Roman period, however, socioeconomic differentiation seems less discernible.

In particular, the investigation of diet based on the analysis of stable isotopes of carbon and nitrogen (Lagia, 2015), although limited due to poor collagen preservation, demonstrates that in Athens protein input was higher in the Classical period compared to later periods (fig. 7.3). This change may have been expressed differently in the two cemeteries, where the Kerameikos cemetery displays a more abrupt change from the Classical to the Hellenistic period. What is more, a small sample of mine workers from Laurion was not found to differ in protein levels from the two Athenian cemeteries, though it displayed a broader range of carbon dietary sources. In com-

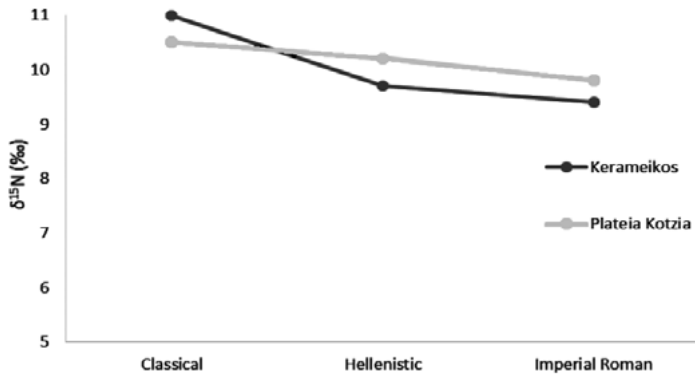


Figure 7.3: Line graph of mean $\delta^{15}\text{N}$ and $\delta^{13}\text{C}$ values in Athens in the Classical, Hellenistic and Imperial Roman periods.

parison to sites that have been analyzed isotopically, the Classical period in Athens shows one of the highest protein inputs (Kavvadias and Lagia 2009, fig. 21) in particular when compared with Early Iron Age (Triantaphyllou 2001; Papathanasiou et al. 2013) rather than Late Bronze Age sites (Richards and Hedges 1999; Papathanasiou et al. 2012). It is possible that cultural patterns may be at play, determining the alignment of diets in contemporaneous sites in southern Greece (Vika 2011) and the colonies (Keenleyside, Schwarcz, and Panayotova 2006; Fuller et al. 2012), but not central Macedonia (Triantaphyllou 2001). Analysis further shows that diet in Classical Athens identifies more with that of higher socioeconomic strata of the Roman period (Prowse et al. 2004; Craig et al. 2009), while Hellenistic and Imperial Roman diets align with poorer segments from the same sites. Differences between sexes are negligible, as in Isola Sacra (Prowse et al. 2005, fig. 4), but women systematically have lower protein signatures compared with men, and this is more visible among samples from simple graves. Although at this fine level it is hard to tell between disparities in accessibility versus inconsistencies due to preference, the evidence thus far suggests that in historical periods, socioeconomic differences including gender are considerably smaller than those apparent from Late Bronze Age samples.

The analysis of stress indicators that develop during childhood demonstrated a similar trend from the Classical to the Imperial Roman periods (Lagia 2014). In the latter, not only the frequency of anemic episodes in the cemetery populations increased but also differences between cemeteries declined. Of particular interest is the evidence based on gender in terms of lesions indicating anemia. The health status and survivability of women exposed to anemic episodes of stress in childhood was found to be less affected by social status and overall socioeconomic conditions than in the male populations. In contrast, the survivability of men exposed to stressors during growth was much more strongly correlated with socioeconomic conditions.

Anemic rates indicate that a greater proportion of men from the lower status cemetery in Athens were affected from stress during childhood than men of the upper strata. Temporal comparisons offered a further refinement of the association between gender and socioeconomic status, demonstrating that in the Imperial Roman period in Athens, although conditions appear to worsen for both sexes, in comparison with preceding eras, it is principally the health status of elite men that was more heavily affected. The health status of the lower class cemetery did not change as noticeably in time while the living standards of the elite clearly declined from the Classical towards the Imperial Roman periods. Because this temporal shift was not as significant for the lower status cemetery, it suggests that in the Imperial Roman period, disparities in health among social strata diminished significantly.

Discussion

Relative to publication productivity in classical archaeology in general, there are still comparatively few bioarchaeological inquiries in classical areas. The greatest number of studies, since the beginning of anthropological investigations in Greece, concerns prehistoric contexts. The need is imperative to employ multidisciplinary approaches to classical mortuary sites and to address through bioarchaeology questions relating to the social and economic history of different periods and regions in Greece. Perhaps the area that requires the greatest immediate attention is the development of an infrastructure that can manage and house the large number of skeletal remains brought to light each year around the country. Even with the best of intentions, the preservation of such remains is seriously hampered without adequate curation and storage space.

Inclusion of human bone specialists in all stages of inquiry can offer a rather different perspective in research designs that integrate human remains and cemetery contexts in the management of cultural property. A continuing challenge is the integration of the participation of biological anthropologists in the design of excavation and research plans, setting priorities of the *anthropologie du terrain* equally to the needs of the overall archaeological context. Rescue archaeology, largely the purview of the Archaeological Service, with its many constraints in planning, time and infrastructure has been described as “highly contingent” (πολλαπλά εξαρτημένη) (Kara-giorga-Stathakopoulou 1988, 87). Yet often it is on account of rescue excavations that the study of ordinary people and contexts can advance, as the examples from Athens have demonstrated.

The wealth of information that the bioarchaeological or biocultural approach can offer (Buikstra 2006a; Zuckerman and Armelagos 2011) is dependent of course on the quality of the osteological assemblages and the density of information derived from their associated contexts. In this respect, it is probably not an exaggeration to state that bioarchaeological investigations in classical archaeology have only begun.

Through systematic excavation, involving both anthropologists in the field and a more open flow of information among specialists, new questions can be asked and old questions re-examined.

Although this contribution has sought to draw attention to challenges in bioarchaeological research in classical contexts in Greece, it has also emphasized that a skeletal collection with even the most basic contextual information can contribute significantly to our understanding of past life ways through the employment of sophisticated analytical techniques and synthetic approaches. With the addition of nuanced studies of context, bioarchaeological research can supersede the narrow field of quantitative analysis, and tackle finer details of human activities and experiences. Unlike the classical archaeology that started to lose its disciplinary status in the 1950s (Terrenato 2002, 1108), biological anthropology came of age during the second half of the twentieth century (Little 2012, 126), largely because of a revitalization of the profession through a profound expansion of its scope and multidisciplinary character, and the employment of new and more sophisticated technical applications that made it possible to ask new questions and delve into new fields of investigation. Scholars in ancient history have urged us to anchor classical archaeological investigations to broader questions relating to the economic, social, and cultural history, with the aim of bringing people back into a dehumanized field (Morris 2004a). It is hard to visualize a more direct means to achieve this goal than through the tangible remains of past peoples themselves.

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Jamieson C. Donati

8 The Greek Agora in its Peloponnesian Context(s)

Abstract: This paper explores the structure and mechanics of the Greek agora by focusing specifically on three urban contexts in the Peloponnese from the eighth century B.C. through the Late Classical period (Argos, Elis and Megalopolis). Although largely underrepresented in established discourses on the Greek agora, the diverse archaeological evidence from the Peloponnese has the potential to recalibrate traditional narratives, helping to formulate a more nuanced appreciation of Greek commercial and civic space independent from an Athenocentric model.

It is argued here that the Peloponnesian experience offers new perspectives into the urban integration, and the structure and use of the Greek agora because of divergent conditions from city to city. Rather than articulate a universal model of the Greek agora, this paper demonstrates that there is often great variation among agoras, even among cities within a single region of the ancient Mediterranean. In fact, none of the Peloponnesian agoras included in this study are exactly alike. This is because the Greek agora responded to unique urban conditions within a particular context. Its spatial mechanics and social structure are never exactly replicated elsewhere. Ultimately this leads to the conclusion that there cannot be just one definition of the Greek agora, but many.

Introduction

The basic characteristics of the Greek agora have long been familiar to classical archaeologists and historians. As a physical entity the agora was the nodal center of an ancient Greek city. Important roads converged from various directions and the agora became a distribution point in the constant movement of people, money, goods and ideas. Traffic circulated into and out from a harbor, city gate or perhaps an important sanctuary. Often a sacred or processional way crossed right through. In plan the agora could be quite simple, essentially consisting of a flat open space surrounded by various administrative, religious and commercial structures. Sometimes its spatial limits were well defined with stoas formally enclosing the central area or boundary markers that clearly indicated what elements stood inside and outside the agora. Yet other times the built environment was fragmentary with only a scattering of buildings that provided no sense of an architectural ensemble.

As a social entity the Greek agora was a venue where a community of citizens could assemble. It was the political heart of a city. Here, people could discuss affairs of the state within civic structures, such as a bouleuterion (senate house) or ekklesiasterion (meeting venue of the popular assembly). Law codes and public decrees were put on display and judicial proceedings were held in courthouses. Also conspicuous were various cults and sanctuaries. A large urban temple might be nearby, a heroön might honor a legendary city founder or lawgiver, and religious festivals with athletic and dramatic events took place throughout the year. Finally, the agora was a vital

center for trade and commerce. Open space and commercial buildings, especially stoas, provided retail space for sellers and workers of various trades.

These are the basic components typically associated with the Greek agora. Yet while all are certainly true in one way or another, they paint a rather incomplete picture with no clear sense of space, time and development. None of these components as a whole were necessarily specific to any one agora in particular, nor did they appear in every Greek city throughout every period. As the present study will show, the Greek agora was a complex social and physical entity. While it is true that certain trends can be identified over time, the agora was inherently heterogeneous and evolved under different circumstances unique to a particular city. Elements that characterized certain agoras might have been radically different elsewhere. This is because, like all spatial and visual elements within an urban context, the Greek agora responded and interacted with a unique ensemble of sociopolitical, religious and economic needs. The factors that contributed to its structure and mechanics were distinctive, and its organization and use never reappeared exactly the same way in another urban setting.

History of Scholarship

In the discipline of classical archaeology, the study of the Greek agora is intimately tied to Greek urban history. Like every element of ancient Mediterranean civilization, how one understands the built environment is constantly dictated and altered depending on the source material and the changing attitudes and methodologies of intellectual inquiries. The Greek agora, for example, has largely been viewed through the prism of select examples and a devoted interest in its political (mostly Athenian democratic) underpinnings. Over the years these factors have continued to shape vantage points, and it becomes challenging to integrate new models, because the majority of classical archaeologists and historians remain content in recycling the more familiar history.

During the early years of archaeological fieldwork in the nineteenth and early twentieth centuries, the notion that the Greek agora—like the central square of a modern European capital—must lie at the heart of an ancient city compelled excavators to search actively for its remains. Its discovery often became a primary objective, because they believed that the agora's impressive collection of public buildings would provide a firm foothold on the topography of an ancient city. In several instances, such as at Corinth in the Peloponnese (Fowler and Stillwell 1932), these convictions proved to be true. At the same time, beyond simply revealing and unearthing, there was little progress during these early years to advance a more nuanced understanding of Greek commercial and civic space. Buildings from different periods were often grouped together and presented as a composite model of the Greek agora, usually to

the detriment of earlier phases, which generally preserved fewer monumental structures (fig. 8.1).

A breakthrough in the study of the Greek agora occurred in the 1930s, when the American School of Classical Studies at Athens initiated large-scale excavations in the Athenian agora that continue to the present (Camp 1986). The results provided a wealth of information about the early development and subsequent Greek and Roman phases of the agora in one of the most prominent Greek urban centers in the ancient Mediterranean. Besides offering valuable insights into the architectural and spatial growth of the agora, the rich epigraphical testimonia, pottery deposits and other small finds, such as official weights and transport amphorae, provided tangible evidence for how the Athenians used their commercial and civic space on a daily basis. There was also great interest among classical archaeologists and historians in drawing parallels between the initial manifestation of the Athenian agora and Athenian democracy (Coulson et al., eds., 1994). Many public buildings in the agora were dated to the period immediately following the democratic reforms of Cleisthenes in 508/7 B.C., and several of these structures, such as the Old Bouleuterion with its hypostyle hall form, became prototypes for the conception of Greek civic buildings in classical archaeology (fig. 8.2). In a sense, democracy now had a physical presence in the modern human consciousness of the ancient Greek built environment.

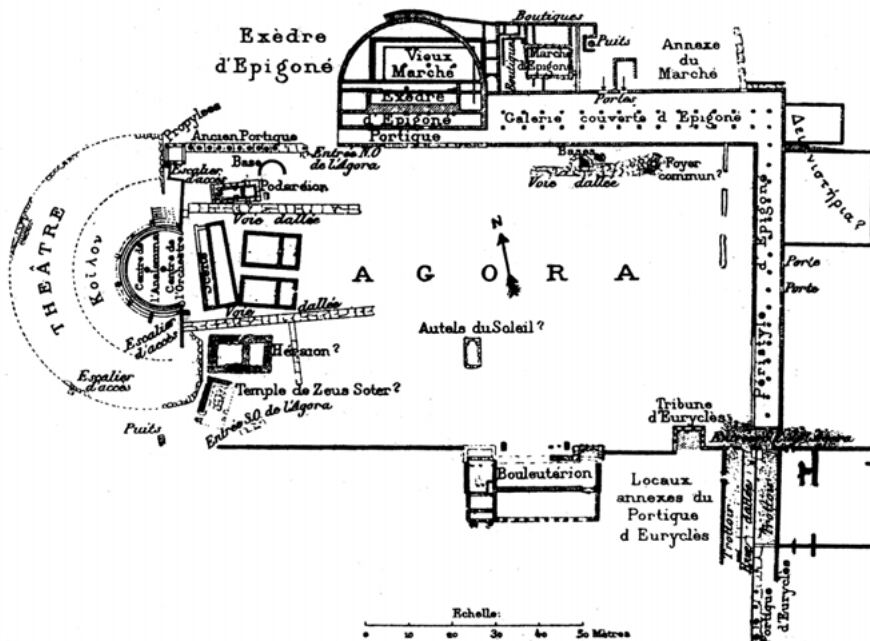


Figure 8.1: Agora of Mantinea (as published in *Mantinée et l'Arcadie Orientale*, G. Fougères, 1898).

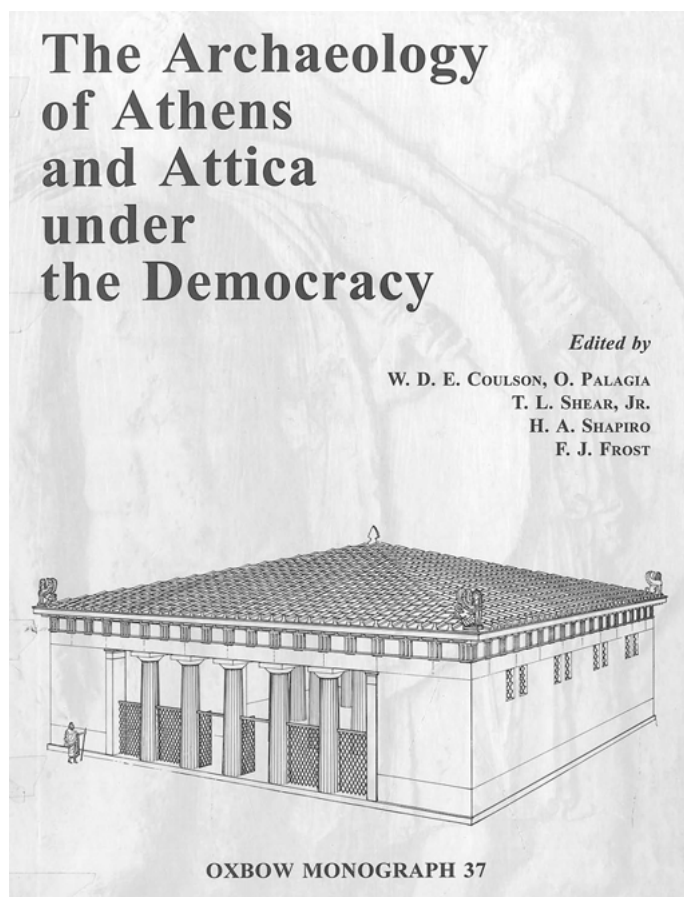


Figure 8.2: Old Bouleuterion in the Athenian Agora (cover illustration of *The Archaeology of Athens and Attica under the Democracy*, W.D.E. Coulson et al., eds., 1994).

While the Athenian agora will always remain indispensable, it has projected an image that potentially deters a better appreciation of the Greek agora, not only in Athens, but elsewhere. This has led to the inevitable result that perceptions of the Greek agora often place excessive emphasis on the Athenian model and its democratic institutions. This may have been necessary fifty years ago when excavations in the Athenian agora and the publication of the material dominated one's understanding of Greek commercial and civic space. However, classical archaeologists and historians now have at their disposal a much more diverse body of source material at such places as Thasos, Kassope, and Megara Hyblaea, and there is greater interest among scholars in exploring alternatives to Athens and Athenian democracy (Brock and Hodkinson, eds., 2000; Hansen and Nielsen, eds., 2004). Yet with few exceptions

these changing attitudes and a wider archaeological sample have not sparked a broad reassessment of the Greek agora (Hoepfner 2006). The impact of Athens cannot be underestimated. The Athenian agora continues to influence how classical archaeologists and historians perceive less well-preserved agoras.

Good examples of this circumstance are the long-standing problems surrounding the identification of the Greek agora at Corinth. Despite positive evidence to the contrary, including concentrations of state owned property and public buildings, many have been unwilling to recognize the area beneath the Roman forum as the Corinthian agora, because, as they argue, it lacks the prerequisite civic buildings among other conditional requirements (Donati 2010). What exactly these prerequisite civic buildings should look like in the archaeological record and the extent to which Corinth as a conservative oligarchy required such institutions on the same scale as Athens are issues that remain unanswered.

Another important source for the Greek agora is Roland Martin's still influential monograph, *Recherches sur l'agora grecque* (Martin 1951). Before this study few had attempted a broad synthesis of the archaeological and literary evidence related to the Greek agora (Tritsch 1932; Wycherley 1942). None could be compared to the large corpus of material presented by Martin, who traced the development of the agora from Homer to the Hellenistic period. His history was masterfully arranged, almost reading as a novel that described the agora's humble origins, to its classical apex corresponding with Ionian innovations in Greek town planning, and ultimately in what Martin saw as its decline and folly during the Hellenistic period. Beyond the twists and turns of his calculated narrative, Martin laid the foundations for an appreciation of the mechanics of the Greek agora and his methodologies and conclusions are still relevant today.

Although Martin explored possible Near Eastern and Aegean Bronze Age influences, he ultimately concluded that the Greek agora was an original creation of Greek urbanism. Its manifestation, utilization and representation within the Greek city were closely intertwined with Greek urban practices. As Martin showed, the agora during the Archaic period (650–480 B.C.) was characterized by its spatial irregularity: buildings were few and lacked any sense of forming an architectural ensemble and open space provided the community with an accessible gathering venue. Despite its rather modest form, especially compared to contemporary sanctuaries, Martin argued through a skillful dissection of the literary and archaeological evidence that the early agora was a critical component of Greek political, judicial, religious and agonistic livelihood, just as it had been in the Homeric epics.

According to Martin, the turning point for a new conception of the Greek agora had its origins in the aftermath of the Persian Wars with the innovations of the fifth century B.C. town planner and theoretician Hippodamos of Miletus. It was in the Ionian Greek cities of Asia Minor that new aesthetics in urban planning and architectural forms were fully realized and then applied. Rational forms were now preferred over the irrational, and the Greek agora became integrated into the urban fabric of

the city at a privileged location. The built environment of the agora itself took on a more complex appearance during the fifth century B.C., and its architectural form and overall expression were closely crystallized with its diverse functions. In Martin's model, the diffusion of a more structured ensemble finally reached Mainland Greece from Asia Minor by the end of the fifth century B.C. and achieved maturity during the following century.

Notwithstanding its positive impact on Greek urban studies and influential presentation of the dynamics and morphology of the Greek agora in a comprehensive history, there are nonetheless shortcomings in *Recherches sur l'agora grecque*. One is struck by the inherent limitations of undertaking such a massive study. This is especially apparent in the chapters that explore the archaeological evidence for Archaic and Classical agoras by region. A full treatment of the material at each site was not possible, and in most instances Martin could only offer abridged summaries that fit into his narrative when convenient. In addition, the limited archaeological material available in the period following World War II is noticeable. Martin relied heavily on the Athenian agora and an archaeological sample that favored the monumental Hellenistic cities of Asia Minor.

Since Martin, only a handful of studies have appeared that explore the wider physical and social dynamics of the Greek agora across multiple settlements (Kenzler 1999; Hoepfner and Lehmann, eds., 2006; Giannikouri, ed., 2011). The major contribution of these works is that they integrate recent archaeological material into discussions on the Greek agora, such as the Archaic agora at Megara Hyblaea on Sicily (Vallet, Villard, and Auberson 1976; Gras and Tréziny 2001) and the Hellenistic and Roman agora on Kos (Rocco and Livadiotti 2011). Even so, the trend in classical archaeology remains publishing the excavations of individual sites, rather than pursuing diachronic multi-context histories. Ongoing and recent fieldwork at such places as Pella, Mantinea, Aphrodisias, Kythnos and many other locations throughout the Mediterranean and Black Sea regions are critically important for recalibrating standard perceptions and misconceptions about the Greek agora. Multi-settlement and multi-regional discourses are now possible; however, they are relatively scarce, because such a task entails confronting large amounts of diverse material.

Peloponnesian Models

This study investigates the Greek agora from a different angle by focusing on the Peloponnese, and more specifically the settlements of Argos, Elis and Megalopolis (fig. 8.3). By reshaping the dialogue squarely into a regional framework, one can detect localized trends within multiple archaeological contexts. In many ways the Peloponnese is ideal for further exploration. Even though the region formed the backbone of Greek culture and was the territory where some of the oldest and most histori-

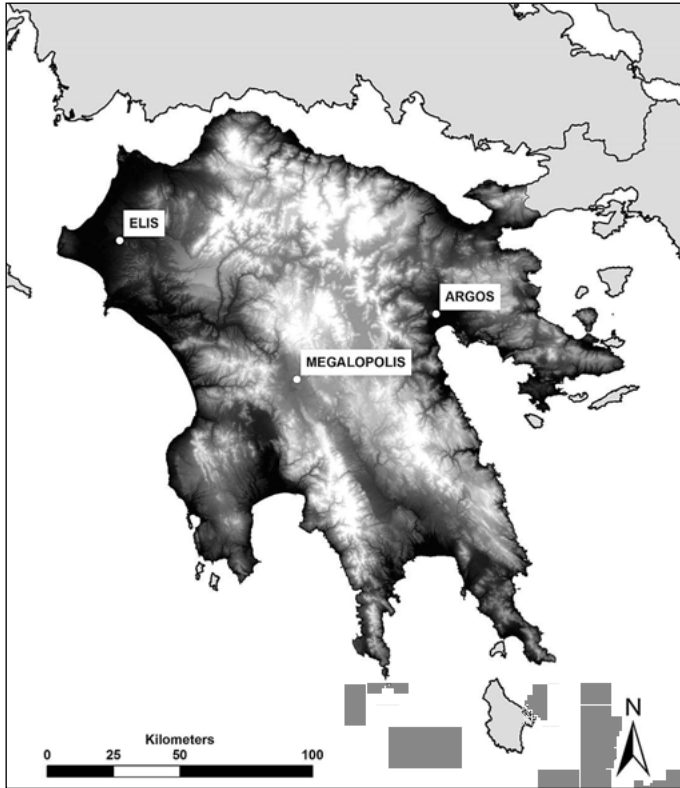


Figure 8.3: The Peloponnese showing the three sites included in study (ASTER GDEM is a product of METI and NASA).

cally significant cities and sanctuaries were located (e.g., Sparta, Corinth, Olympia), the settlements here are often overlooked. Some of the most influential surveys on Greek urbanism either ignore the Peloponnese altogether or at best give cursory attention to the region. Everything from Roland Martin's landmark study, *L'urbanisme dans la Grèce antique* (Martin 1974), to Wolfram Hoepfner and Ernst-Ludwig Schwandner's polemical overview of the Greek city and democratic ideals, *Haus und Stadt in klassischen Griechenland* (Hoepfner and Schwandner 1994), refrain from integrating Peloponnesian settlements into their historical narratives.

When Peloponnesian settlements do receive attention, the discourse primarily focuses on Argos, Corinth and Sparta. The three are usually grouped together as classic examples of de-nucleated settlements that coalesce into a single dominant urban center by a gradual process spanning several centuries (Hölscher 1998; Osanna 1999). Part of the reason is because Thucydides famously characterized Sparta during the fifth century B.C. as a collection of small villages arranged *kata komas* (separate communities) in the old tradition (Thuc. 1.10). For the most part archaeological

excavations at Argos and Corinth have confirmed the existence of loose settlement clusters from the location of early burials. This Peloponnesian model of staggered development is often used to create a regional dichotomy between “old-fashioned” Mainland Greece and the rational town planning of the Greek West and Ionia. Seemingly straightforward, this contrast often disregards the fact that a number of Peloponnesian settlements were grid-planned cities as early as the sixth and fifth centuries B.C. Halieis in the southern Argolid (Boyd and Jameson 1981) and Arcadian Trapezous near Megalopolis (Karapanagiotou 2005) are just two examples.

From the approximately 130 Greek cities known to have existed in the Peloponnese during the Archaic and Classical periods (650–323 B.C.), the archaeological and literary evidence confirm nearly twenty different agoras (Hansen and Nielsen, eds., 2004). In the majority of instances, however, knowledge of these agoras is limited to snippets of information from an ancient author, inscription or partially excavated context. For example, Pausanias mentioned in the second century A.D. that the agora in the Achaean city of Aigion had a grave monument of a certain Talthybios (Paus. 3.12.7) and that the agora in the southern Laconian city of Oitylos had a wooden image of Apollo Karneios (Paus. 3.25.10). Similarly, excavations near the theater at the harbor settlement of Epidauros in the Argolid revealed boundary stones inscribed “boundary of the agora” (Petrounakos 2011). Yet without more substantial archaeological evidence none of these sites are helpful in formulating comprehensive models of the Greek agora.

It is with great disappointment that the Spartan agora remains indefinable. Even though Pausanias gave a detailed description of the monuments, civic buildings and sanctuaries in the Spartan agora, as it existed in his time (Paus. 3.11.2–11), sporadic excavations over the past century have been unable to resolve its identification. One possible location for the Spartan agora is on the Palaiokastro hill, approximately 200 meters east of the monumental stone theater and urban sanctuary of Athena Chalkioikos. Here, excavations have brought to light a large circular platform of uncertain function dating to the Hellenistic period, a long Roman Stoa toward the east, and what appears to be the southern end of another monumental Roman stoa north of the circular platform. Some scholars believe that the two stoas defined the southern and western sides of the Spartan agora (Waywell 1999, 1–14; Kourinou 2000, 97–129). Even if the Palaiokastro hill is the correct location of the Spartan agora—so far only a tentative suggestion—there are still too many uncertainties. Only a few structures have been found in the putative Spartan agora and few remains date earlier than the Hellenistic period. While the literary sources are indeed useful, including the lengthy description of the site by Pausanias, it is impractical to grasp the spatial and architectural elements of the Spartan agora without better evidence.

On a more positive note, ongoing archaeological fieldwork projects in the Peloponnese should shed new light on the Greek agora. Old sites excavated in the nineteenth and early twentieth century are being reexamined and new sites are being discovered for the first time. For example, the 39th Ephorate of Prehistoric and Classi-

cal Antiquities has renewed archaeological fieldwork in the agora at Mantinea, more than a century after the original French excavations. Recent excavations at Messene by the Archaeological Society at Athens have uncovered a large Hellenistic stoa along the northern side of the agora with measuring devices (*sekomata*) in situ (Themelis 2007). Subsurface structures have been identified in the Messenian agora by a concurrent geophysical survey. In general, geophysical survey and remote sensing are quickly becoming important methodological tools for studying and reconstructing Greek agoras within the Peloponnese and the surrounding urban environments. Over the past five years geophysical surveys have taken place at Sikyon (University of Thessaly, Institute for Mediterranean Studies), Tegea (Hellenic-Norwegian Excavations at Tegea), and at numerous settlements in Triphylia (German Archaeological Institute's Ancient Triphylia Survey). Finally, satellite remote sensing is being employed by the present author to explore the urban development in and around the agoras of Elis, Mantinea and Megalopolis.

The present study concentrates on three Peloponnesian settlements (Argos, Elis and Megalopolis), whose urban apparatus becomes known from the archaeological and literary evidence. This means that one can draw tangible conclusions about the structure and development of each agora, and how Greek commercial and civic space ties in with the broader patterns of urban history at each site. Time plays an important role here. In each city one must consider how elements changed over time and what factors, either internal or external, contributed to these changes. The Argive agora is tremendously instructive in this respect, because, as a Peloponnesian settlement with a rich history, one can trace its development from the eighth century B.C. to the end of Late Antiquity. At present, Argos and Corinth are the only Peloponnesian cities where the archaeological material permits such an extensive exploration over a wide time span.

The two other settlements, Elis and Megalopolis, offer an interesting contrast to the conventional sequence of gradual Peloponnesian urban development. Since both were established following a synoicism in the fifth and fourth centuries B.C. respectively, the agoras at these sites serve as alternative models. Without the influence of any significant prior occupation, Elis and Megalopolis adapted to the needs of a population at a specific moment. This provides a unique opportunity to observe how the Greek agora responded to such conditions, while offering valuable insights into the integration and manifestation of the classical agora. The Classical context of the Elean and Megalopolitan agoras is critical for a more balanced understanding of Greek commercial and civic space. The spatial and architectural dynamics of these agoras diverge considerably from the Athenian agora, as well as from each other, demonstrating that the Greek agora cannot be defined in one way.

Argos

The Argive agora lies at the southwestern corner of the present day town of the same name, just below the ancient acropolis known today as the Larissa hill (fig. 8.4). Here, an irregular area has been the focus of systematic excavations by the French School at Athens for more than 100 years. The current boundaries of the agora are artificially defined by features of the modern town, whose roads and property lines limit the extent of archaeological excavations. The basic structure of the Argive agora consists of a natural ridge along the southern side that rises slightly above the surrounding topography. During the fifth century B.C., a north-facing stoa with an inverted wing along its eastern side was built here. The western boundary of the agora was defined by a large hypostyle hall contemporary with the stoa and identified by the French archaeologists as the *bouleuterion*. Since the front of this building faced east, it likely marked the agora's western border; however, some argue that the western boundary of the agora was closer to the Larissa hill, near a rock-cut theatron and sanctuary of Aphrodite (Marchetti and Rizakis 1995, 441–443).

The lowlands north of the stoa were susceptible to annual flooding and required proper drainage throughout the history of the site. Beginning around 500 B.C., and with significant additions in the following centuries, a large collection channel and conduit for water was built to carry excess water through the agora (Pariante, Piérart, and Thalmann 1998, 212). The northern section of the agora was characterized by a more loose arrangement of structures. A large *krepidoma* at the northwest, perhaps a terrace wall or the bottom courses of a building, may tentatively be identified as the southern *temenos* of the sanctuary of Apollo Lykeios, one of the oldest and most celebrated cults at Argos. Instead of running parallel or perpendicular to other structures in the agora, this putative sanctuary had a diagonal orientation. A semicircular orchestra, only partially exposed and dated to the fourth century B.C., abuts the *krepidoma* along the same axis. The diagonal orientation of the *krepidoma* and orchestra is countered by a long structure tentatively identified as a second stoa at the northeast that is only partially excavated and of uncertain date. The opposing diagonal alignments of these three features (*krepidoma*, orchestra and a northeastern building), together with the southern stoa and hypostyle hall, gave the Argive agora an unusual triangular appearance.

Before the Roman period the central space of the agora was free from major constructions. By the fourth century B.C. the main feature was a racetrack set slightly off-axis from the southern stoa. It began just in front of the hypostyle hall and continued more than 200 meters toward the east. Since the eastern side of the agora remains largely unexcavated, it is difficult to understand the original urban plan. One would assume that the agora continued as far east as the end of the racetrack, but this cannot be confirmed without proper excavations. Foundations belonging to a Hellenistic temple that almost certainly had a classical predecessor lay approximately seventy meters south of the end of the racetrack. This is the best evidence for the southeastern

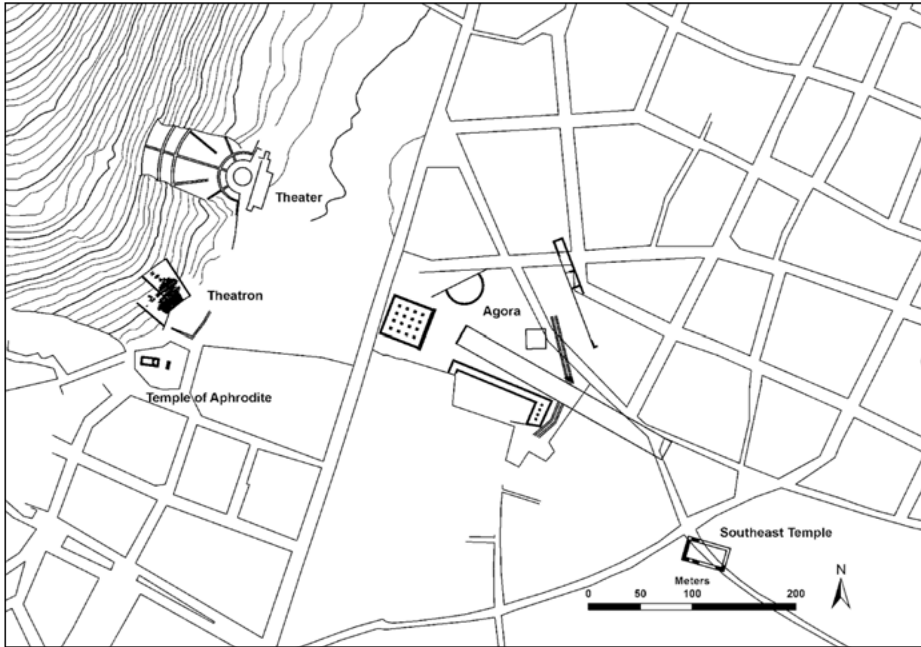


Figure 8.4: Argos (drawing J.C. Donati).

boundary of the agora. Other structures within the agora include a square fountain house beneath a Roman nymphaeum that might date to the fifth century B.C. and a small Hellenistic temple.

One of the debates surrounding the Argive agora deals with the sociopolitical factors that contributed to its formative stages. The most common model creates a union between the democratic government established at Argos in the 460s B.C. and the origins of the agora (Courtils 1992; Viret Bernal 1992; Leppin 1999). The second half of the fifth century B.C. was indeed a period when monumental architecture in the Argive agora becomes recognizable in the archaeological record. The important question here is whether these developments were sparked by the needs of a new democratic constitution, or whether they were a continuum of evolving urban practices. The first explanation faithfully follows the established narrative of the Athenian agora, where a strong connection is drawn between the democratic reforms at the end of the sixth century B.C. and the enhancement of civic space. In the case of Argos, however, an examination of the material evidence indicates that the Argives began the process of preparing their commercial, religious and civic space before the democratic government came to power.

Admittedly it is difficult to characterize the formative stages of the Argive agora, because the built environment does not take on permanent architectural form until the end of the sixth century B.C. Therefore, one cannot definitively say whether Argos

had an agora before 500 B.C. There are indications, however, that early developments had an impact on its ultimate placement within the city's urban fabric.

During the ninth and eighth centuries B.C., Argos consisted of small villages all clustered around one another (Hall 1997, 93–99; Vink 2002, 54–56). From what can be extracted from the archaeological evidence, the southwestern village where the agora would eventually develop acquired a heightened significance during these early stages. The signs of occupation, such as burials and modest architectural remains, are more numerous and more diverse here than elsewhere. Deposits with iron slag, metal fragments and clay indicate that artisans were working around the southern stoa and semicircular orchestra in the second-half of the eighth century B.C. (Roux 1968, 1020–1021; Pariente 1992b, 676). These are contemporary with two or three structures beneath the southern stoa that have the same orientation as the classical building's northern colonnade (Piérart and Thalmann 1978, 783). While this is not evidence that Argos had an agora at the end of the eighth century B.C., it does show that the spatial parameters of the agora, at least on the southern side, were very likely influenced by an arrangement of structures that predate any classical building by as much as 300 years.

By the middle of the seventh century B.C. burials were confined to communal cemeteries that bordered the periphery of the inhabited area (Hall 1997, 99; Vink 2002, 58). This development is consistent with contemporary trends in Greek urban practices where the dead were frequently restricted to large cemeteries beyond the immediate areas of habitation. Yet compared to the previous century, new constructions around the classical agora and elsewhere are noticeably less, although one does clearly observe a tighter urban environment. Argos is a classic case of a de-nucleated settlement coalescing into a single dominant urban center by a gradual process spanning several centuries.

The late sixth century B.C. construction in the Argive agora is of special interest. Significant alterations to the built environment show that the Argives intended to transform the area into something more formal. At this time an open-air drainage channel and conduit for water was built: a crucial addition for the construction of permanent structures in the lowlands north of the southern stoa (Pariente, Piérart, and Thalmann 1998, 215–216). It is worth noting the similarities to early drainage systems at Athens and Corinth that were vital for the initial development and expansion of the agoras in these cities (Thompson and Wycherley, 194–195; Morgan 1953, 131–134). Contemporary with the waterworks are a series of walls on top of the southern ridge (fig. 8.5). They have the same orientation as the northern colonnade of the southern stoa, and, it will be recalled, the late eighth century B.C. structures that preceded them (Pariente, Piérart, and Thalmann 1998, 212–213). These walls were not from simple domestic structures. One building was more than thirty meters in length, and besides many Attic black-glaze cups, a number of lead weights were discovered in associated levels. Also found were eleven lead plaques. One is inscribed and deals with the delivery of a diverse number of commercial goods, such as straw (Piérart and



Figure 8.5: Archaic foundations beneath the northern colonnade of the southern stoa in the Argive agora from southeast (photo J.C. Donati).

Thalmann 1987, 590–591; *SEG* 1987, nos. 284–286). Other weights and lead plaques came from later levels and should be associated with commercial activity here. None of these small finds have been published in detail, but they obviously have important implications on early developments in the Argive agora.

The Argive agora had at least one permanent stone temple by the beginning of the fifth century B.C. This was the sanctuary of Apollo Lykeios, one of the oldest and most important cults at Argos. It was here that public decrees and law codes were inscribed on bronze plaques or stone pillars and put on display. This is detailed by Thucydides, who specifies that a 420 B.C. treaty during the Peloponnesian War was inscribed on a stone pillar in the Argive agora within the sanctuary of Apollo (Thuc. 5.47.11). As it turns out, the precise location of the sanctuary remains elusive, although there is



Figure 8.6: Doric architrave block with nail holes originally from the sanctuary of Apollo Lykeios in the Argive agora (photo J.C. Donati).

good reason to suspect that it was at the northern side of the agora based on the find-spots of later inscriptions related to the cult and the krepidoma near the semicircular orchestra (Marchetti and Rizakis 1995, 445–454, 467–472; Courbin 1998). In addition, Doric architrave blocks and an inscribed altar dedicated to Apollo, found reused in a Late Roman structure within the hypostyle hall, appear to have originated from the sanctuary of Apollo Lykeios (Roux 1953, 116–123; Bommelaer and Courtils 1994, 61–68). Stylistically the architrave blocks date to the early fifth century B.C., and there is general agreement that they come from an archive building within the sanctuary or even from the temple itself. A number of these blocks bear nail holes and some of them even have bronze nails still attached with bronze fragments (fig. 8.6). These are from bronze plaques that were once attached to the temple, remarkably similar to Thucydides’ statement at 5.47.11 that the sanctuary housed public decrees (Charneux 1953, 395–397; Courtils 1981, 609).

The connection between Apollo’s cult and public record keeping shows that the god was a vital guarantor of political life at Argos. Apollo provided the city’s inhabitants with religious and political authority, as did the similar cult of Apollo at Corinth whose imposing sanctuary and temple also served as a repository for public decrees near the Corinthian agora (Bookidis and Stroud 2004, 410). The close connection



Figure 8.7: Archaic inscription from the Theban dedication in the Argive agora (Pariente 1992a, p. 228, fig. 2).

between the Argive agora and Apollo Lykeios is further confirmed by Sophocles in the *Electra* (6–7), who, alluding to the epithet of Apollo as the wolf-god, describes the agora at Argos as “of the god who kills wolves” (τοῦ λυκοκτόνου θεοῦ ἀγορὰ Λύκειος).

A heroon to those who fought in the legendary Theban expedition was likely constructed in the Argive agora by the end of the sixth century B.C. (Pariente 1992a). The heroon consisted of a number of upright boundary markers surrounding an open central space. Circular cavities on two or three sides of each marker were for the placement of wooden bars. Interestingly, the holes do not correctly line up for the erection of a boundary fence in their present arrangement near the semicircular orchestra, and not surprisingly the stratigraphy indicates that the heroon was re-erected here sometime in the Late Roman period. One marker carries an inscription that reads “of the heroes at Thebes” (ἡρώων τῶν ἐν Θέβαις). The early lettering style dates to the middle of the sixth century B.C. (fig. 8.7). Pausanias mentions that he saw statues of the seven leaders who died at Thebes in the Argive agora (Paus. 2.20.5). He further says that the Argives adopted the statue group after the play of Aeschylus produced in 467 B.C. As others have noted, Pausanias must be referring to another Theban dedication, rather than this heroon, which dates before the production of Aeschylus’ play (Pariente 1992a, 203). That there did exist an earlier Theban dedication is certain. Less clear is whether it was originally erected in the Argive agora. Similar monuments from other cities (e.g., Corinth, Athens, Elis) show that small heroa dedicated to legendary heroes or lawgivers were ubiquitous in Greek agoras (Kenzler 1999, 184–195); therefore, the Theban dedication would not be out of place in such a context.

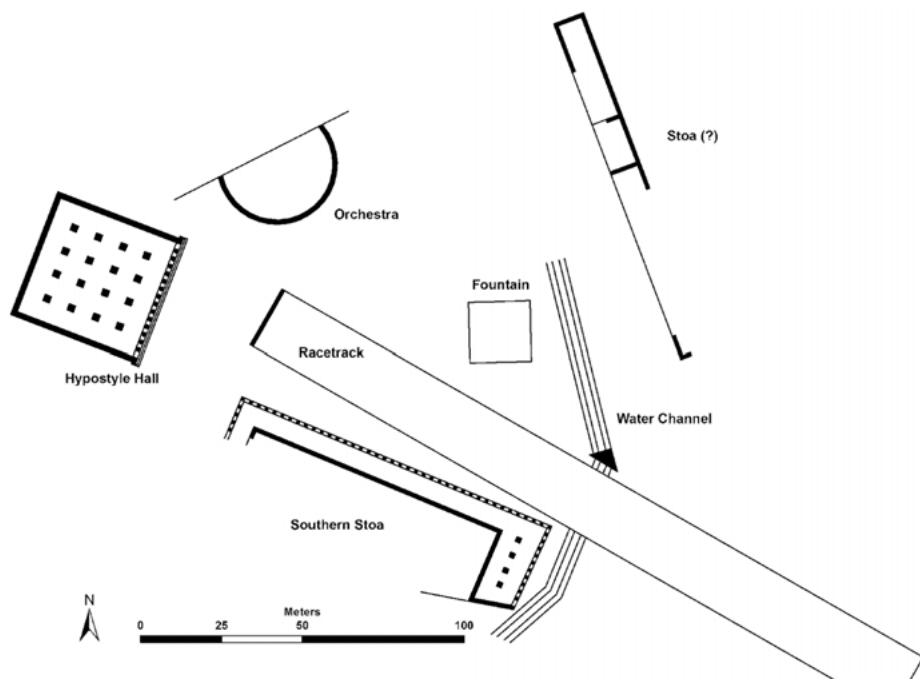


Figure 8.8: Agora of Argos in the fourth century B.C. (drawing J.C. Donati).

Two trends emerge from this brief description of the late sixth and early fifth centuries B.C. developments in the Argive agora. First, the Argives set about to create a more complex urban center. Water channels prevented seasonal flooding from occurring and the boundaries of the agora were given greater definition. The southern side was defined by the natural ridge and a series of commercial structures, while the northern side was marked by the sanctuary of Apollo Lykeios. Second, one observes an ensemble that combines commercial and religious structures. These significant alterations to the built environment demonstrate that the Argives intended to transform the spatial environment into something more formal and lasting. All of this occurred within the space of what is recognized as the classical agora, showing that the initial architectural stages of the Argive agora emerged by 500 B.C. while the city was governed by an oligarchic constitution.

Throughout the classical period the Argive agora witnessed intense building activity, including the construction of conspicuous public facilities, more urban sanctuaries, and commercial and cultural venues (fig. 8.8). According to the archaeological record, construction remained stagnant until the addition of the southern stoa and the hypostyle hall in the second-half of the fifth century B.C. Excluding the Apollo Lykeios sanctuary, these were the largest structures built in the Argive agora until now. The southern stoa was a monumental successor of the earlier buildings on the

southern ridge, while the hypostyle hall occupied a previously undeveloped location. Both appear to have been part of a single building program: the northern colonnade of the southern stoa is so closely aligned with the southern wall of the hypostyle hall to preclude any disassociation (Marchetti and Rizakis 1995, 463–467). Pottery deposits beneath the southern stoa place its construction, and therefore likely that of the hypostyle hall, in the third-quarter of the fifth century B.C.

In plan the hypostyle hall was nearly a perfect square with sixteen pillars providing internal support (Bommelaer and Courtils 1994). The building communicated directly with the agora toward the east. The French archaeologists Jean-François Bommelaer and Jacques des Courtils reconstruct the building with a monumental Doric facade having fourteen columns. This is a hypothetical reconstruction considering that no Doric columns or architrave fragments have been discovered and the building only survives to stylobate level at the southeastern corner. Despite uncertainties in the architectural details, the hypostyle hall must have been an impressive building in the Argive agora.

There is no direct evidence, such as an inscription or small finds, to explain the function of the hypostyle hall. Because of its large size and approximate architectural parallels with other hypostyle halls thought to be *bouleuteria* (e.g., Athens, Sikyon), many classical archaeologists and historians identify the building as the Argive *bouleuterion*. One must admit, however, that architectural parallels before the Hellenistic period are relatively scarce. The few examples that do survive from the fifth century B.C. show that hypostyle halls were inherently multifunctional, they were not confined to a Greek agora, nor were they necessarily used for political gatherings. In size and scale the closest contemporary parallels are the Telesterion at Eleusis (Travlos 1988, 91–169) and the Odeion of Pericles at Athens (Camp 2001, 100–101), neither of which were civic structures. It is not until the Hellenistic period that one finds examples of square and rectangular hypostyle halls frequently being used for civic gatherings, such as the *bouleuteria* at Sikyon and Dodona (Gneisz 1990, 316–317, 351–352). Even so many Hellenistic hypostyle halls were not *bouleuteria* (e.g., Thasos, Delos). The notion that the hypostyle hall at Argos was a civic structure is one possibility; however, it is preferable to remain cautious on a specific identification until further evidence turns up in the archaeological record.

Other buildings within the Argive agora include the southern stoa (Pariente, Piérart, and Thalmann 1998, 213–214), which dates to the third-quarter of the fifth century B.C., and a northeastern structure (Pariente, Piérart, and Thalmann 1998, 215), which might date to the same period or later. The incorporation of monumental stoas in the Greek agora was an increasingly common phenomenon throughout the fifth century B.C. and the presence of one or more stoas at Argos should be viewed within this architectural tradition. As a physical entity the stoa was used to great effect as an organizer of space. Routinely it was placed along the perimeter of an open area, as the southern stoa in the Argive agora, where it became a monumental backdrop to the everyday commotion taking place in the agora. Three Hellenistic inscrip-

tions reused as building material in Roman renovations to the northern foundations of the southern stoa mention *agoranomoi*, officials responsible for market regulations (Vollgraff 1904, 427; Piérart 2001, 492–494). Cavities on the upper surface of one of the inscriptions indicate that the inscribed block was used as a measuring device (*sekoma*) for liquids and grains, whose capacity was certified by the *agoranomos*.

Since the original context of the *agoranomoi* inscriptions is uncertain, one cannot be certain whether activity related to trade and commerce was the primary function of the southern stoa, let alone whether such activity occurred here after its initial construction in the fifth century B.C. There was certainly precedent for trade and commerce in this area of the Argive agora from the lead weights and an inscribed plaque associated with predecessor buildings of the southern stoa dating to the end of sixth century B.C. This evidence, in combination with the *agoranomoi* inscriptions, alludes to a continuity of function even though a gap exists between the material evidence.

Other facilities in the agora included a semicircular orchestra and a racetrack in front of the hypostyle hall. Both date no earlier than the fourth century B.C., and it is possible that they were not constructed until the Hellenistic period. The orchestra was an open-air venue bordered by a course of limestone blocks that defined the boundary of the semicircular area (Pariente, Piérart, and Thalmann 1998, 214–215). Its western end was cut nearly in half by the aforementioned krepidoma. The starting line of the racetrack with sixteen lanes began in front of the hypostyle hall and continued more than 200 meters eastward (Piérart and Thalmann 1987, 585–588; Piérart and Touchais 1996, 51–52). For its entirety, the running surface of the racetrack consisted of a hard-packed gravel surface. The only exception was the halfway mark where the running surface crossed over the late sixth century B.C. drainage channel. Here, the Argives built a triangular holding basin and platform for the racetrack to pass over, and they even placed a stone pillar to mark the halfway point.

It is challenging to understand how the inhabitants of Argos used these venues on a daily basis without contextualized small finds recovered through excavations or insights from an ancient source. The racetrack obviously accommodated footraces at certain times throughout the year, but this must have happened only occasionally depending on what athletic events corresponded to Argive religious festivals. Likewise, some scholars are keen to view the semicircular orchestra as serving religious and cultural needs. Suggestions range from it being used by chorus dancers associated with unknown rites for the cult of Apollo Lykeios (Moretti 1993, 6; Pariente, Piérart, and Thalmann 1998, 215), and for dancers involved in matrimonial contests connected to the legendary Argive past (Marchetti 1996, 120).

It is worth noting the almost identical arrangement in the Corinthian agora, where a fifth century B.C. circular platform of uncertain function stands near the starting line of a contemporary racetrack (fig. 8.9). On a general level, therefore, one can say that the Greek agora was a venue that could accommodate large groups of people to witness public spectacles, just as it could accommodate commercial, civic and religious gatherings. During religious festivals that were sponsored by the state,



Figure 8.9: Circular platform in the Corinthian agora from southwest. The starting line of racetrack in the left background (photo J.C. Donati).

the agora was the preferred, and even the most practical site to hold athletic events or dances connected to urban festivals. At Argos the specific details of these events are obscure.

At least one urban sanctuary was added to the Argive agora in the fifth century B.C. Foundations of a large temple have been recovered approximately seventy meters south of the eastern end of the racetrack (Consolaki and Hackens 1980). The proximity between temple and racetrack implies that the former was integrated into the agora, or at least very close to its southeastern corner. If this is true, then the southeastern temple, like the earlier sanctuary of Apollo Lykeios along the northern side, was a peripheral feature providing definition to the Argive agora. The foundations of the temple were constructed from large poros blocks, out of which an east-facing temple can be reconstructed. Fragments of Doric columns and capitals survive, but stylistically they date to the third century B.C. Wall blocks and columns of an earlier structure that were reused in the foundations of the temple imply the existence of a classical predecessor. Further support comes from a number of architectural terracottas recovered from the building that date to the middle of the fifth century B.C. Although it is unclear to which deity the temple was dedicated, several Hellenistic coin blanks found intentionally deposited inside the temple indicate that the cult had an administrative function in the Argive state.

The patterns in the spatial organization of the Argive agora throughout the fifth and fourth centuries B.C. provide an image of a city that adopts a more monumental and multifaceted urban center. The spatial limits are more clearly defined with monumental public buildings that look inward toward the central space. Some structures, such as the southern stoa, appear to have cultivated past tendencies in the built environment. Other venues, such as the orchestra and racetrack, created new spaces for human ventures. Commercial activity was likely prominent, two urban temples provided moral and legal authority, and an earlier heroon made a connection with the city's legendary past. Athletic events and perhaps religious festivals took place here. Not only was the agora a suitable urban venue for festivals because of its openness and proximity to urban sanctuaries, but it was also a symbolic location for uniting the population. Finally, it is possible that civic magistrates assembled in the hypostyle hall. However, one cannot assume that civic officials only gathered in the largest and most elaborate public buildings, or that these types of buildings only were intended to serve the needs of civic officials.

The diverse venues in the Argive agora show that this space was the public and religious heart of a community of citizens. It is this characteristic in particular—the ability of the agora to forge a common thread in the everyday pursuits of its citizens at a common location—that help one appreciate the overall mechanics of the Argive agora within its urban context.

Elis

The Elean agora is situated within a level region between the southern banks of the Peneios River and the city's ancient acropolis (fig. 8.10). The topography and identification of buildings in and around the agora have been the primary focus of archaeological fieldwork for more than one-hundred years by the Austrian Archaeological Institute at Athens (1910–1914; 1960–1981) and the Archaeological Society at Athens (1960–present) with the support of the 7th Ephorate of Prehistoric and Classical Antiquities.

Elis was a significant settlement in the northwestern Peloponnese, serving as the administrator of the sanctuary of Zeus at Olympia and the Olympic Games. According to the ancient geographer Strabo and historian Diodorus (Strabo fig. 8.3.2; Diod. 11.54.1), the city was established as the center of a polis in a synoicism that took place in 471 B.C. (Roy 2002). Before this date, however, the surrounding Elean communities, apparently without a central city for administration, were powerful enough to expand their influence through warfare or favorable alliances and impose perioikic status on neighboring towns (Roy 1997; 2002, 251–252). This included settlements in the regions of Akroreia and Pisatis, and perhaps even those within Triphylia further south. The most significant gain of the Eleans was the seizure of Olympia from nearby

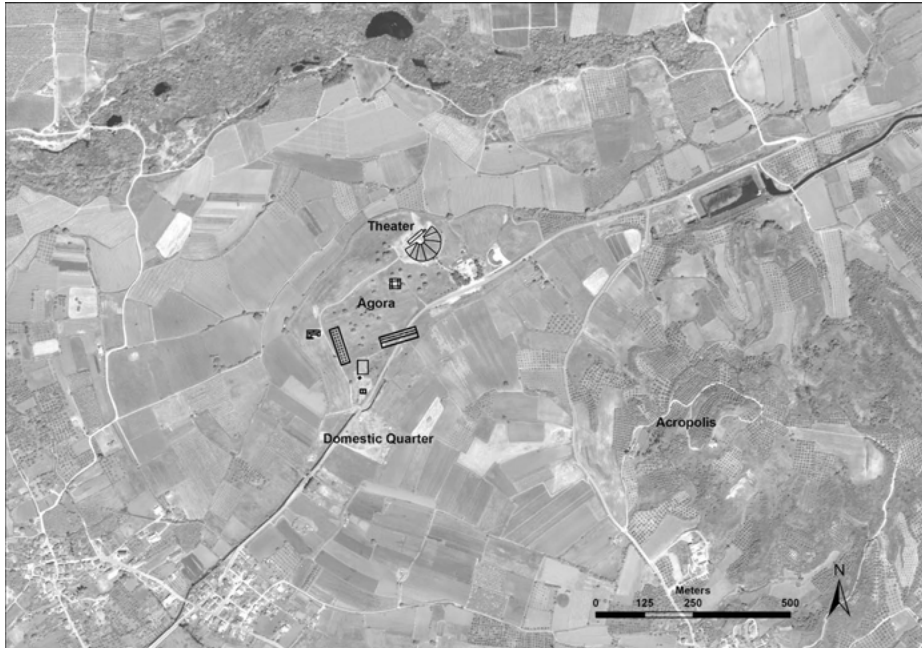


Figure 8.10: Elis: satellite image (DigitalGlobe © 2015).

Pisa around 570 B.C. (Paus. 6.22.4). Not only did the Eleans host the Olympic Games, but they used the sanctuary for their own administration and set up public documents there (Hansen and Fisher-Hansen 1994, 86–89; Crowther 2003; Nielsen 2007). Several bronze inscriptions from the sixth and fifth centuries B.C. relate to the Games, but many refer to the Elean state. These deal with the use of land, treaties with other states and *leges sacrae* in the Elean dialect (Minon 2007, nos. 2–20). In addition, civic buildings at Olympia were used by Elean officials for the administration of the sanctuary and perhaps internal Elean affairs. A bouleuterion dating as early as the sixth century B.C. and a prytaneion of the fifth century B.C. have been identified through archaeological excavations (Mallwitz 1972, 125–128, 235–240; Morgan and Coulton 1997, 112–113) and descriptions of the site by Xenophon and Pausanias (Xen. *Hell.* 7.4.31; Paus. 5.15.8–9; 5.20.10; 5.23.1; 5.24.1,9).

The unique circumstances of the Elean state creates an interesting environment from which to explore the structure and development of its agora. Many factors present in the sociopolitical structure of Elis, including its transition from a decentralized community into a bipolar political entity, are not often encountered in other Greek settlements. From the sixth century B.C. onwards, the political organization of the Eleans was closely intertwined with the sanctuary of Zeus at Olympia, even after the establishment of Elis following the synoicism of 471 B.C. Significant constitutional reforms were also concurrent with urban developments. Considering the epigraphical and literary evi-

dence, a conservative oligarchy dominated by a few influential families gradually gave way to a more inclusive oligarchy over the course of the sixth century B.C. (Minon 2007, no. 4; Arist. *Pol.* 5.6.10–11). This administrative arrangement in turn transformed into a democracy sometime in the first half of the fifth century B.C. The potential influence of these constitutional changes on the urban layout of Elis, as well as on the structure and administration of Olympia, are important when one examines the agora.

The advantage of studying the Elean agora, and then placing it within the wider context of other Greek agoras, is that the city is almost exclusively a classical and post-classical creation. Beyond some early burials and a scattering of archaic material whose relationship with an early settlement is unclear, very little material at Elis dates before the synoicism. Unlike Argos and Corinth, this provides a good opportunity to observe how a classical agora developed without the influence of an earlier settlement of significant size and population.

Instead of confirming that Elis was created *ex nihilo* following a synoicism, as one learns from Strabo and Diodorus, the archaeological evidence demonstrates that there did exist an early, albeit small settlement before 471 B.C. (Eder and Mitsopoulos-Leon 1999; Eder 2001). Sustainable signs of occupation appear during the eighth century B.C. Even though the remains are rather modest, they leave no doubt that people were congregating at Elis during an early period. The evidence largely consists of graves and pottery associated with burials found near the Hellenistic theater and along the slopes of the acropolis (Eder and Mitsopoulos-Leon 1999, 10–24). No architecture dating to this early period has been discovered, there are no signs of early cults, and the mortuary evidence is quite limited.

During the sixth century B.C., precisely when the Eleans were exerting their regional influence on surrounding communities and at Olympia, there are recognizable changes in the urban fabric. As at Argos and Corinth, the tendency in Greek urban practices was to eliminate burials from the domestic and public quarters of the city in favor of group cemeteries at the periphery. Something similar yet on a smaller scale occurred at Elis, because the theater area and southern region of what is recognized as the classical agora cease to be used for burials (Eder and Mitsopoulos-Leon 1999, 24–33). More intriguing evidence are a handful of painted architectural terracottas found immediately south of the classical agora (fig. 8.11). Two sima fragments are quite early and date around 580–560 B.C. based on similarities in style and workmanship to the early architectural terracottas from Olympia. Three other sima fragments date to end of the sixth century B.C. In total, the five sima fragments are the earliest evidence of architecture at the site (Eder and Mitsopoulos-Leon 1999, 25–33, 37–39). They likely came from small temples near the classical agora, but so far no contemporary foundations have been discovered. Another important discovery was an early bronze inscription found southwest of the classical agora that records a judicial process (Siewert 1994; 2001; Minon 2007, 15–17, no. 1). It was discovered among numerous fifth- and fourth-century B.C. terracotta figurines and other votives that presumably came from a nearby sanctuary (Mitsopoulos-Leon 2001). Considering the



Figure 8.11: Archaic terracotta sima discovered in the vicinity of the classical agora at Elis (Eder and Mitsopoulos-Leon 1999, pp. 27–28, fig. 14c).



Figure 8.12: Archaic bronze inscription discovered in the vicinity of the classical agora at Elis (Eder and Mitsopoulos-Leon 1999, p. 25, fig. 13).

early letter style and its boustrophedon arrangement, the inscription dates to the first half of the sixth century B.C. (fig. 8.12). This bronze object is unique at Elis and predates the earliest Elean inscriptions at Olympia by twenty-five years or more.

How one interprets the significance of the judicial inscription has important implications for the development of the agora. Some argue that the bronze plaque proves that judicial events were held in an Elean agora by the early sixth century B.C. and that the agora had an administrative function during this period. Peter Siewert surmises that the document was put on display in a nearby sanctuary associated with the contemporary architectural terracottas (Siewert 2000, 25). That the area of the classical agora functioned as a venue for political, judicial and religious meetings during the sixth century B.C. is certainly appealing. The termination of burials around the agora suggests that space at Elis was being restructured to fulfill other needs. The architectural terracottas imply the existence of early sanctuaries, and the bronze judicial document may have been stored in an archive of a sanctuary close to the agora. As similar evidence from Apollo cults at Argos and Corinth show, public documents were often displayed in a sanctuary next to the agora.

In truth, the evidence from archaic Elis is too slight to draw any tangible conclusions. The uniqueness of the judicial inscription does present a dilemma. Might its small size (smaller than a human hand), and the fact that archaeological excavations have not recovered any similar documents leave open the possibility that it was brought to Elis from Olympia much later? That the judicial inscription was found in a sacred deposit of the fourth century B.C. more than two centuries after it was inscribed should raise additional questions about its original provenance. Apart

from this inscription, the sanctuary of Zeus at Olympia was the exclusive repository of Elean state documents by the end of the sixth century B.C. and throughout the fifth century B.C. Also peculiar is the lack of in situ architecture from this period at Elis. Were early structures in the area of the classical agora built of perishable materials that are more difficult to identify in the archaeological record? For now these are questions that remain unanswered.

Despite the limitations of the early material, the contextualized evidence clarifies two important details about Elis: (i) the synoicism did not lead to the creation of a new settlement where none existed before, and (ii) the patterns of habitation at Elis underwent changes during the sixth century B.C., although the exact nature and significance of these transformations are ambiguous. Regarding the first point, the contradiction of the material evidence with the literary accounts of Strabo and Diodorus is striking, especially since the ancient authors are explicit in the date and details of the synoicism. Most scholars explain the discrepancy between the archaeological and literary evidence through a different interpretation of the term synoicism (Roy 2002). Rather than accept the notion that synoicism amounts to a completely new city, as it did at Megalopolis (see below), there is consensus that the synoicism resulted from political and constitutional developments, perhaps to strengthen the position of the Elean state by uniting surrounding communities. Elis may have been a modest settlement before the synoicism, but it was probably not yet a polis-center.

It is important to note the divergence between Elis and other settlements in the Peloponnese. By the early fifth century B.C., the agoras at Argos and Corinth included spring houses, canals, workshops, stoas, sanctuaries, monumental stone temples, heroa and a modest collection of commercial and multipurpose venues. Nothing of the sort has been discovered in the agora at Elis. If the early settlement did have a place where people congregated for economic, religious and administrative needs, and if this place was the same as the classical agora, then it was largely an undeveloped public space with few permanent buildings.

Looking at the structure of the classical agora, the establishment of a polis-center at Elis following the synoicism did not lead to an immediate transformation of the urban environment. Substantial changes were slow to develop and stone architecture does not appear until the fourth century B.C. When visiting the site in the Roman period, Pausanias said that the Elean agora looked nothing like the large uniform agoras of the Ionian cities, commenting instead that it was built in the “older manner” (ἀρχαιότερα) with stoas separated from one another and with streets passing through them (Paus. 6.24.2). In other words, the Elean agora was not like the symmetrical and compact agoras defined by stoas and other monumental public buildings on all sides, often found in the grid-planned Hellenistic cities of Ionia (Martin 1951, 372–417). While Pausanias’ description of the site does not have any bearing on the appearance of the classical agora, his observation that the Elean agora was built in the “older manner” is the impression from the excavated remains today.

In plan the classical agora consisted of a loose group of buildings roughly arranged around an irregular open area (fig. 8.13). On the whole its spatial boundaries were sporadically, if not poorly defined, despite the presence of two monumental stoas that provided some semblance of structure. The West Stoa, a large three-aisled stoa in the Doric order, defined the western boundary of the agora and separated the public area from the city's western suburbs. Along the southern side of the agora, the South Stoa had an unusual double-sided arrangement with colonnades on both sides. Inside, the stoa was divided by a central partition wall. That these structures marked the western and southern limits of the Elean agora, at least in the Roman period, is made explicit by Pausanias who saw the West Stoa after entering the agora from the northwest (Paus. 6.24.2–3) and described the South Stoa as facing the agora and the exterior (Paus. 6.24.4–5). Both buildings were boundary markers that separated features inside the agora from those outside.

The northern and eastern regions of the Elean agora are less well defined. Sporadic archaeological excavations have revealed a scattering of foundations from small structures and bases from monuments, most of which date to the Hellenistic and Roman periods (Orlandos 1961, 133). None give clear definition to the spatial parameters of the agora. The only exceptions are a square Hellenistic structure with a central courtyard and surrounding rooms of uncertain function (Walter 1913, 149; Tritsch 1932, 73; Mylona 1984, 65–67), and the theater constructed out of an artificial

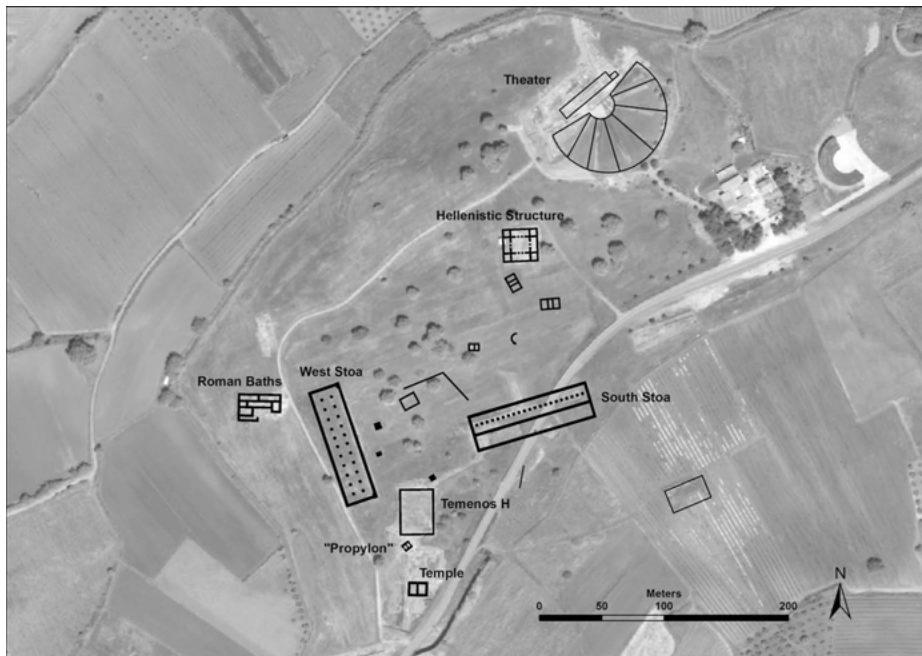


Figure 8.13: Agora of Elis: satellite image (DigitalGlobe © 2015).

earthen mound around 300 B.C. (Glaser 2001). Both stood near the agora's northeastern corner, since domestic structures near the theater imply that the public sphere ended somewhere close by (Mylona 1982, 50–51). The discovery of hundreds of Hellenistic bronze voting disks from the theater marked on one side with a di-gamma and alpha, an abbreviation for *Fᾶλις*, the dialectic name of Elis, and on the other side with a delta-alpha, an abbreviation for *damosion* (public property), demonstrates that the Elean popular assembly convened meetings here (Baitinger and Eder 2001).

Religious structures were located southwest of the agora along the eastern side of a north-south road leading to a recently excavated domestic quarter of the city. The buildings here included a large rectangular structure (Temenos H), which appears to be an open-air Hellenistic temenos, a small structure originally described as a propylon of uncertain date and use, and a west-facing temple with a pronaos that dates to the fifth century B.C. (Walter 1913, 148–149; 1915, 61; Tritsch 1932, 72). The temple is one of the earliest surviving examples of stone architecture at Elis. A small stoa was built south of the temple in the following century (Mylona 1984, 65–67). Many other buildings of Hellenistic and Roman date stood here. None have been studied or published in any detail. From the discovery of Late Roman kilns, the region southwest of the agora was partly used as an industrial quarter after the third century A.D. (Andreou and Andreou 2007, 18); however, there is no evidence yet to suggest that artisans were active here at an earlier period.

According to Pausanias, the region immediately south of the Elean agora served as a venue for urban cults of Aphrodite (Paus. 6.25.1). He saw a temple of Aphrodite Ourania behind the South Stoa with a chryselephantine cult statue by the fifth century B.C. sculptor Phidias, and an open-air sanctuary of Aphrodite Pandemos with a bronze cult statue by the fourth century B.C. sculptor Skopas. No physical remains of these sanctuaries have been identified, though archaeological fieldwork south of the South Stoa has been sparse. Whatever the case, the identification of Phidias and Skopas as sculptors may serve as tentative evidence that the cults of Aphrodite Ourania and Aphrodite Pandemos date no later than the fifth and fourth century B.C. respectively.

This is the current state of the Elean agora and the monuments in the general vicinity of the commercial, religious and civic center of Elis. Of the archaeological remains uncovered to date, no structure of any measurable size was built in the Elean agora until the fourth century B.C. This was the situation despite the presence of classical sanctuaries south and southwest of the agora built with stone architecture and expensive cult statues. The date of initial construction in the Elean agora depends on how one interprets the chronology of the two monumental stoas.

Lacking any firm stratigraphic data from the early twentieth-century excavations, the West Stoa tentatively dates to the fourth century B.C. (Walter 1913, 147–148; 1915, 64; Tritsch 1932, 73; Coulton 1976, 45, 237). This is based on the style of terracotta sima fragments (antefixes, painted lion head water spouts) found within the building and its monumental three-aisled form (ninety-six by twenty-five meters) which

finds the best parallels in the architectural traditions of the fourth century B.C. and afterward. No columns or other architectural fragments from the building's superstructure survive and it is only from the description of Pausanias that the stoa can be restored in the Doric order (Paus. 6.24.2–3) (fig. 8.14). The sheer monumentality of the West Stoa meant that space in the Elean agora could be more tightly regulated, both visually and physically. It was also an opportunity for the architect to experiment with the internal plan of the building. The organization of space in three aisles with two internal colonnades was not common in Greek stoa architecture (Coulton 1976, 79). In the Peloponnese, this arrangement is only met elsewhere with the Stoa of Philip at Megalopolis, discussed below.

The identification and function of the West Stoa is also ambiguous. Pausanias refers to the building as the place where the *hellanodikai* spent much of their time, and where they erected altars to Zeus in front of the colonnade (Paus. 6.24.2–3). The *hellanodikai* were a group of Elean officials that had responsibilities related to the Olympic Games and the Elean state (Minon 2007, 532–535). Besides serving as judges at Olympia, they also administered the compulsory thirty-day training period before the festival in the gymnasia at Elis. As an administrative institution, the *hellanodikai* can be traced back to the second-quarter of the fifth century B.C. from epigraphical evidence; they numbered anywhere between two and ten officials depending



Figure 8.14: Eastern foundations of the West Stoa in the Elean agora from south (photo J.C. Donati).

on the period, and they were selected by lot among the members of the Elean boule (Crowther 2003, 65–66). Of course, the association of the *hellanodikai* with the West Stoa from Pausanias' testimony does not prove that the stoa had an earlier connection with these Elean officials.

The chronology of the South Stoa is better understood thanks to a subsequent study of the building in the 1970s and 1980s by the Austrian Archaeological Institute at Athens (Mitsopoulos-Leon 1983). The results revealed that the stoa in its present state does not date before the early first century A.D. based on pottery recovered from the foundations. There was no convincing evidence that any of the surviving wall courses date to an earlier period (Mitsopoulos-Leon 1990; Pochmarski 1990). This was a surprising discovery, because Pausanias speaks explicitly about the circumstances of the stoa's initial construction (Paus. 6.24.4–5). According to him, the stoa was financed from the spoils of a war against Corcyra (Corfu). He further says that the building was known to the Eleans as the Corcyrean Stoa. The battle in question is often dated by historians to 435–432 B.C. (Tritsch 1932, 72; Heiden 2006, 54). This is a period when Thucydides reports that the Eleans aided the Corinthians in a dispute with the Corcyreans (Thuc. 1.27.2; 1.46.1). The South Stoa was the building that Pausanias saw in the second century A.D., but it was not the original stoa. A Greek predecessor that no longer survives must have existed where the South Stoa in its Roman phase now stands.

Besides the testimony of Pausanias, additional evidence for an earlier stoa comes from terracotta sima fragments (antefixes, painted lion head water spouts) that presumably adorned the building (Walter 1913, 143–144; 1915, 64–65; Tritsch 1932, 72–73). These date to the fourth century B.C. and were found nearby. The important question is whether the double-sided South Stoa in the Elean agora retained the features of its presumed Greek predecessor. One argument in favor is the position of the stoa between the agora and the urban sanctuaries of Aphrodite described by Pausanias. The South Stoa divided the two spheres from one another, and, at least in the Roman period, acted as a monumental backdrop for both venues. The double-sided ground plan was likely inspired by its dual function between agora and urban sanctuary. The presence of at least one Aphrodite sanctuary in the fifth century B.C. may have dictated the placement of the South Stoa. The building was not aligned with the southern end of the West Stoa, but was positioned further north. This arrangement was perhaps made necessary by the preexistence of the Aphrodite sanctuary, which prevented the architect from constructing the building further south.

There is no evidence for the function of the South Stoa, beyond its proximity to the agora and the urban cults of Aphrodite. Pausanias only mentions that he saw statues lining both sides of the central partition wall (Paus. 6.24.4–5). No other ancient author mentions the building. On a general level, the South Stoa and the West Stoa reflect urban trends of the fourth and third centuries B.C., when monumental structures defined the public sphere from other parts of the city. These stoas were often multifunctional and could have been used for commerce, gatherings of state officials,

judicial hearings and a host of other activities. That these types of monumental buildings appear in the Elean agora around the fourth century B.C. signals that the Eleans incorporated current trends in Greek urban planning and architecture into their built environment. Where no large structures had existed before, the Eleans adorned the agora with monumental edifices like other Greek cities. Even though it took 100 years or more after the synoicism of the city, the Elean agora was progressing toward a more permanent and elaborate public area, rather than just an open expanse of space.

Although future excavations might alter the picture, the Elean agora demonstrates that a Greek agora does not require an elaborate built environment during the fifth century B.C. Stone architecture is virtually nonexistent throughout the century. This was the case despite the proximity of the agora to sanctuaries with temples and costly cult statues. The Elean agora also shows that there is not always a correlation between a democratic constitution and the elaboration of civic space. Elis was a democracy during the fifth century B.C., and there is ample evidence for Elean civic bodies from this period in the epigraphical testimonia, but so far no classical civic buildings have been identified outside of Olympia. In the case of Elis, the purpose of the classical agora was not necessarily for the accommodation of civic officials and civic activity, and there is no measurable effect of city administration on the built environment until the theater was built around 300 B.C. When the monumental stoas appeared around the fourth century B.C., the Elean agora maintained a relatively modest appearance. Compared to other cities, the agora was always an undeveloped space within the city.

Megalopolis

The city of Megalopolis was positioned in the middle of a large upland basin in southwestern Arcadia. There was never a major urban settlement here until Megalopolis was created around 370 B.C. by a group of Arcadian settlements (Roy, Lloyd, and Owens 1988; Hornblower 1990). Under the constant threat from Sparta, the city was established for political and defensive purposes. A new and large city provided added security for the Arcadians under the aegis of a single city-state, which acted as a barricade against Spartan interests in the Peloponnese. After the synoicism, Megalopolis joined with Mantinea and other Arcadian cities to form an Arcadian Confederacy. Like the new city the primary purpose of the Confederacy was to restrict Spartan interests in the Peloponnese. Epigraphical evidence from the fourth century B.C. shows that Megalopolis was likely the largest and most influential city in the Confederacy (Nielsen 2004, 521; Roy 2005, 262–263).

The second quarter of the fourth century B.C. marked an important period in the history of Greek urbanism in the Peloponnese. The political tug of war between Sparta, Thebes and Athens forced settlements to become deeply involved in regional

conflicts within their own territories. Alliances were formed and smaller settlements realized that survival was difficult without the help of a more powerful polis. The prevailing instability in the Peloponnese led to new urban experiments as smaller communities sought safety in numbers, often with the assistance of a regional power interested in limiting the influence of a rival. Megalopolis was a product of these political realities, but it was not an isolated example. The Arcadian city of Mantinea underwent an almost simultaneous synoicism in 370 B.C. The new city succeeded an older settlement that was forced to depopulate by the Spartans in 385 B.C. While in the southwestern Peloponnese, Messene was established with the aid of Thebes around 370 B.C.

An appreciation of the historical events and wider regional trends that led to the creation of Megalopolis is critical for an understanding of its built environment and agora. Unlike Argos and Corinth, which took centuries to reach physical maturity, the public structures, sanctuaries and residential quarters at Megalopolis had to be devised and constructed on a rapid scale. A new population had to be brought inside the city under difficult circumstances. Megalopolis likely became the largest Arcadian city only ten to twenty years after its foundation. A new civic and religious identity had to be forged where none had existed before. The city had to be defensible in the face of an immediate threat from Sparta. Megalopolis was also required to be a leader in the newly formed Arcadian Confederacy.

The speed and complexity in which these events unfolded in the fourth century B.C. provide an exceptional opportunity to observe how a Greek agora responded to such conditions. The intention was to give its citizens and even its rivals the semblance of an organized and respectable city with a structured agora and venues to accommodate members of the Arcadian Confederacy. The desire to convey this message led to the creation of progressive building types that complemented one another in a single venue. The spatial structure of the agora at Megalopolis was very different from Argos and Elis. Rather than look backward at its predecessors, the Megalopolitan agora anticipated trends in Greek urban planning of the Hellenistic period.

Looking at the structure and organization of the city, two features immediately stand out (fig. 8.15). First, the Helisson River divided Megalopolis into nearly two equal parts. Usually a large river acted as a peripheral feature in a Greek urban center. Yet the city founders chose to include the river inside the settlement and make it a central feature of the new city. This circumstance created defensive liabilities, because the two places where the Helisson River entered and exited Megalopolis became natural weaknesses in the fortification of the city. Only fifteen years prior in 385 B.C., the Spartans successfully breached the fortification walls at Mantinea by damming the Opsis River that flowed through the town. This action caused extensive damage to the mud brick walls and flooded parts of the urban center, leading to the surrender of the city. When the Mantineans rebuilt their city in 370 B.C., they redirected the river around the fortification walls to eliminate a reoccurrence of the same catastrophic events. The inhabitants of Megalopolis were obviously aware of what happened at nearby



Figure 8.15: Central urban area of Megalopolis: satellite image (DigitalGlobe © 2015).

Mantineia. By incorporating the Helisson River into the urban fabric, other factors beyond just the protection of the city must have been taken into account.

The second feature of interest is that the monumental public buildings and sanctuaries of Megalopolis were central features of the new urban environment. This arrangement was a calculated attempt by the town planners to enhance the heart of the new city with civic, commercial and religious structures. In addition, they chose to divide the public quarters into two separate parts by using the Helisson River as a natural boundary marker. The agora was positioned along the northern side, while the theater, the meeting hall of the Arcadian Confederacy called the Thersilion, and a stadium were located along the southern side. It is with this composition that one can better appreciate the function of the Helisson River in the urban fabric of the city. There must have been a symbolic appeal of distinguishing two types of public zones that reflected the dual role of Megalopolis in the Arcadian Confederacy and its own civic administration. The agora served the municipal requirements of the citizens, while the public buildings south of the Helisson River were reserved for public spectacles and official meetings of the Arcadian Confederacy.

The Megalopolitan agora was highly regular in plan (fig. 8.16). The central open area was large and defined on all sides by monumental public buildings at right angles to one another. According to the archaeological excavations carried out from 1890–1891 by the British School at Athens (Gardner et al. 1892) and from 1991–2002 by

the German Archaeological Institute at Athens (Spyropoulos et al. 1995; 1996; Lauter and Spyropoulos 1998; Lauter 2002; Lauter 2005), large scale construction began only a few decades after the foundation of the city and many buildings within the agora were complete by the end of the fourth century B.C. (Roy 2007).

The western side of the agora was lined with a continuous complex of administrative and religious buildings. These included from north to south: (i) a hypostyle hall at the northwestern corner identified as the bouleuterion, (ii) a long structure with a series of rooms arranged around an internal peristyle court, (iii) a courtyard building, and (iv) a peristyle structure with an altar, hearth and a series of rooms. The excavations of the German Archaeological Institute directed by Hans Lauter found evidence for many successive phases based on stratified deposits and the style of roof tiles (many stamped) and other architectural fragments (Lauter-Bufe and Lauter 2011). The first phase of construction dates to the middle of the fourth century B.C. Afterward, there is good evidence that most buildings were extensively damaged by the Spartan sack of Megalopolis in 223 B.C. and rebuilt during the second century B.C. This catastrophic event at the hands of the Spartan king Cleomenes II is evident throughout the agora and the public buildings south of the Helisson River.

One of the better-preserved structures along the western side of the agora is the hypostyle hall (Lauter-Bufe and Lauter 2011, 32–50). In form the building consisted of a broad forecourt and a room supported by four internal columns. Access into

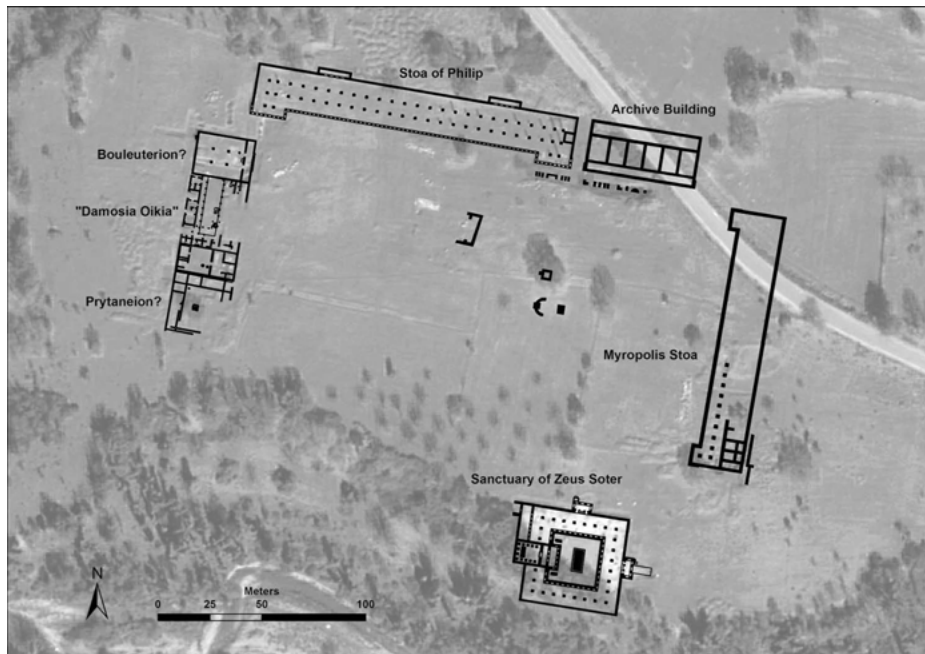


Figure 8.16: Agora of Megalopolis: satellite image (DigitalGlobe © 2015).

the building was through a colonnaded facade that communicated directly with the agora. Although the number of columns is uncertain, architectural fragments recovered from the site indicate that the exterior of the building was in the Doric order. Several fragments of Ionic columns suggest that the interior of the building was decorated in the Ionic order. In its present state the hypostyle hall belongs to renovations following the Spartan sack of Megalopolis in 223 B.C. This is evident from the secondary use of architectural fragments; some members, including the Ionic column fragments, were badly damaged by fire. Additional evidence for the Spartan devastation comes from a destruction layer with broken terracotta antefixes, presumably from the original roof of the building. Despite the damage, the renovations appear to have adopted the basic form of the original structure. Many limestone orthostate blocks are still in situ and probably come from the building's initial phase, as do architectural blocks from the superstructure reused for building material.

The question concerning the identification of the structure as the bouleuterion is intriguing and touches upon the difficulties confronted by classical archaeologists and historians in distinguishing the function of a particular building. As with the hypostyle hall in the Argive agora, mentioned above, there is no archaeological evidence to suggest that the Megalopolitan boule assembled inside. This is something that is inferred based upon traditional concepts of building typologies in Greek Architecture. If the hypostyle hall was the bouleuterion at Megalopolis, a hypothesis that cannot be excluded, then it is an early example of a building type that does not mature until the Hellenistic period.

In the excavation reports, the peristyle and courtyard buildings south of the hypostyle hall are referred to as *damosia oikia* (public house), an indication of their assumed administrative function (Lauter-Bufe and Lauter 2011, 65–90). Destruction layers and architectural spolia imply that the buildings were rebuilt during the Hellenistic period following the Spartan sack of the city. Sometime in the Roman period the southern wall of the hypostyle hall was shortened to enlarge the peristyle building and a new facade was given to the buildings.

The structure south of the peristyle and courtyard buildings was the final complex along the western side of the Megalopolitan agora (Lauter-Bufe and Lauter 2011, 90–103). Only the limestone foundations of the walls and the supports for the peristyle courtyard survive. Two interesting architectural features are a ground-level altar from the central courtyard constructed out of limestone blocks and a hearth in one of the northwestern rooms. Pottery deposits from the foundation walls place the building's initial phase to the middle of the fourth century B.C. Other contextualized finds include more than 200 Hellenistic stamped terracotta roof tiles marked with the names of individuals who donated money for the reconstruction of the building following the Spartan destruction in 223 B.C. These include the famous historian Polybius and the general Philopoemen, both citizens of Megalopolis in the second century B.C. Some of the roof tiles were marked as *damosioi* (public property), an indication that the reconstruction was under the supervision of the state.

The use of the building is a matter of debate. The altar indicates that the complex was at least in part a sanctuary. Some of the roof tiles were stamped as “Philopomen to Zeus” (Φιλοποίμην Διί), which shows that the Megalopolitan general made a dedication to Zeus by partly funding the reconstruction of the roof (fig. 8.17). On the other hand, the hearth and the arrangement of rooms around a central courtyard may be a sign that the building served as the prytaneion. The only certainty is that the building had a function of civic importance. Prominent Megalopolitan statesmen were involved in the reconstruction of the building, which apparently was also tied to the cult of Zeus.

Along the northern side of the Megalopolitan agora stood the Stoa of Philip and the partial remains of what Pausanias identified as an archive building (fig. 8.18). The Stoa of Philip is the best-preserved and most visible monument within the archaeological site today (Spyropoulos et al. 1995, 122–125; 1996, 269–275, 278–282; Lauter and Münkner 1997; Lauter and Spyropoulos 1998, 415–417, 420–426). Pausanias is the only ancient writer to associate the stoa with Philip (Paus. 8.30.6), but this is confirmed by the discovery of a stamped roof tile marked “property of the Philippeion” (Φιλιππείου) found in the eastern wing of the building (*IG* V.2, 469.6). According to Pausanias, the stoa was not built by the Macedonian king, but dedicated to him by the inhabitants of Megalopolis. During the second half of the fourth century B.C., the Arcadians sought the aid of the growing power of the Macedonians to help settle regional disputes in the Peloponnese. As a way of bargaining for their loyalty, Philip gave the Megalopolitans additional territory in Arcadia shortly after his victory at the battle of Chaeronea in 338 B.C. (Spyropoulos et al. 1995, 123). The construction of the Stoa of Philip symbolized the partnership between Megalopolis and a powerful foreign ally, who could help protect the city by maintaining a strong front against Sparta and rival Arcadian factions.



Figure 8.17: Stamped roof tile from southwestern building (prytaneion?) in the Megalopolitan agora (Lauter-Bufe and Lauter 2011, Taf. 101b).



Figure 8.18: Stoa of Philip in the Megalopolitan agora from southeast (photo J.C. Donati).

At nearly 160 meters in total length, the Stoa of Philip was one of the largest stoas ever built in the Peloponnese of any period. Its presence within the agora was dominating and arresting. It had a monumental Doric facade flanked by two projecting wings on either side. Inside there were two internal colonnades in the Ionic order that accentuated the length of the building by creating three separate aisles like the West Stoa in the Elean agora. Two symmetrical exedras with Corinthian colonnades were set along the back wall of the building, and one of them had a rectangular base for the display of a life-size statue group, perhaps the Macedonian royal family (Spyropoulos et al. 1995, 124–125). The Stoa of Philip was clearly meant to impress the viewer both outside and inside, and convey a message of power, authority and a relationship between Megalopolis and a powerful foreign king.

The recent architectural study of the stoa by the German Archaeological Institute at Athens argues that the building was erected sometime between 340–330 B.C. (Lauter and Lauter-Bufe 2004, 151–153; Lauter 2005, 235). This is a chronology based on architectural similarities with other buildings at Megalopolis (Thersilion, sanctuary of Zeus Soter) and historical considerations following the death of Philip in 336 B.C. Others are less willing to accept an early date for a monumental stoa that typologically falls better within the architectural traditions of the third and second

century B.C. For example, the equally monumental South Stoa in the Corinthian agora is now dated to the beginning of the third century B.C. from a reassessment of the associated pottery deposits, and the large stoa in the Messenian agora also dates to the same century. The core issue here exposes a number of dilemmas in modern archaeological practice. Lacking datable finds and pottery from secure deposits, how much emphasis can be placed on stylistic considerations and architectural conventions? For the Stoa of Philip at Megalopolis the answer has important implications. The building is either a forerunner of architectural trends in Greek urban planning, or else it squarely falls within these trends.

Set on the same axis and separated from the stoa only by a narrow corridor, a large civic building complemented the Stoa of Philip by creating an integrated architectural ensemble on the northern side of the agora (Lauter and Spyropoulos 1998, 438–444; Lauter-Bufe and Lauter 2011, 147–157). Square pillars along the southern side acted as a monumental colonnade, which provided access into a long corridor and a series of rooms. Only two rooms have been recovered so far through excavations. The word that Pausanias used to describe the building is ἀρχεῖα (Paus. 8.30.6), which can refer to any kind of administrative building. Its prime location next to the Stoa of Philip and a series of conspicuous Hellenistic dedicatory monuments in front of the building indicates that it was a civic structure of some importance.

Since the nineteenth century British excavations, archaeological fieldwork has never resumed here. From the architectural reexamination of the structure in the 1990s, Hans Lauter argued that the building, as it now stands, dates after Megalopolis was sacked by the Spartans in 223 B.C. This is suggested by wall blocks that are in secondary use, as well as holes for iron clamps that do not match with adjacent blocks. Lauter did believe that the lowest course of foundation blocks might predate the Hellenistic renovations. These as well as reused blocks from the upper walls appear to come from an earlier third century B.C. incarnation of the archive building. Beyond this, the available material evidence does not permit any greater degree of precision.

Even though the eastern side of the agora remains largely unexcavated, sporadic fieldwork has confirmed that another monumental stoa stood here. This is usually identified with the Myropolis Stoa that Pausanias says was built by the third-century B.C. tyrant Aristodemos (Paus. 8.30.7). This places the building securely in the Hellenistic period. It is not known whether the stoa had a predecessor, or whether the eastern side of the agora was void of any construction until the Hellenistic period.

Looking toward the southern side of the agora, most of the area has been completely wiped away by the Helisson River. One exception is the sanctuary of Zeus Soter at the southeastern corner. It was one of the city's most important and conspicuous urban sanctuaries and its execution was innovative (Lauter-Bufe 2009). Two monumental entrance propylons provided access into a large, square temenos. Inside, the sanctuary was marked out by a double colonnaded portico in the Doric and Ionic orders that surrounded a rectangular altar. On the western side of the complex, and directly on axis with the eastern propylon, stood the temple with a hexastyle Doric

facade that projected out into the central court. The entire architectural composition adhered to a strict geometry where all elements were aligned with one another. This kind of tight ensemble was more characteristic of the Hellenistic period and until recently the sanctuary was thought to date to the third or second century B.C. (Martin 1951, 491; Coulton 1976, 61, 171; Jost 1985, 226). However, pottery deposits below the northern foundations from the German excavations confirm that the sanctuary dates to the end of the fourth century B.C. (Gans and Kreilinger 2002, 188; Lauter-Bufe 2009, 69–78). The architectural novelty of the complex makes it one of the earliest peristyle sanctuaries in the Greek World. As with the Stoa of Philip and possibly even the bouleuterion, one observes here a building that breaks away from the conventional boundaries of Greek architecture and in this particular instance creates new horizons in the conception of Greek sacred space.

By the end of the fourth century B.C., and only two generations after the foundation of the city, the agora at Megalopolis achieved a monumental architectural form rarely observed before the Hellenistic period. Although the buildings were conceived of separately and had distinct features, their overall execution and presentation was as an architectural ensemble. Unlike some agoras where new structures had to be inserted carefully and at times haphazardly into a well-established urban center, the town-planners at Megalopolis had the advantage of beginning with a clean slate. Under these conditions it is constructive to observe their intentions and goals. The focus revolved around generating an impressive collection of civic buildings, urban sanctuaries and multipurpose structures within a single and lucid venue. Right angles and symmetrical forms were favored over an irregular appearance. Newer building types, such as the peristyle sanctuary and the monumental three-aisled stoa, were preferred over more conservative forms of architecture. There seemed to be a general willingness to experiment with buildings and signal a new period in the formation of the Greek agora. This is a significant point to observe. One comes to learn that its architectural conception and spatial development anticipate what is to come in the Hellenistic period.

Conclusions

The Peloponnese offers new perspectives into the urban integration, structure and use of the Greek agora. As Argos, Elis and Megalopolis demonstrate, there is potentially great variation among agoras within a single region of the ancient Mediterranean. In settlements with an extensive history of occupation, such as Argos and Corinth, the architectural development of the Greek agora was often a gradual process. The Argive model for staggered development is constructive, because one can appreciate the factors that contributed to its placement and use over many centuries. Even though permanent structures and venues do not materialize until around 500 B.C., earlier

urban developments influenced why this space became a focal center for the community. As early as the eighth century B.C. the location of the Argive agora acquired a heightened significance with more numerous burials and constructions. The picture is still incomplete, however, and the evidence does not reveal when, so to speak, the agora became the agora. The idea of an early urban space reserved for a mixing of communal activities is most apparent at Greek colonial settlements. To cite a well-documented example, the late eighth- and early seventh-century B.C. urban planners at Megara Hyblaea in Sicily intentionally demarcated an area of the city to function as an agora (Vallet, Villard, and Auberson 1976). In its initial conception, the agora remained a simple open area framed by roadways, and only later did the inhabitants construct permanent buildings.

The Elean and Megalopolitan agoras serve as alternative models to the gradual development of Greek commercial and civic space that one has come to recognize at places such as Argos, Athens and Corinth. Here, new urban experiments in the fifth and fourth centuries B.C. mark a different phase in the history of the Greek agora. This is best exemplified with the Megalopolitan agora, which in the fourth century B.C. amassed an impressive collection of tightly packed structures that surrounded an open rectilinear space. Monumental stoas, urban cults, and commercial and administrative offices were all integrated together within the span of only a few generations. The town planners of Megalopolis worked with an entirely new conception of Greek urban planning, one that is observed elsewhere at places such as Messene, Priene and Kassope. Here, the rigid placement of buildings in relation to one another was preferred over irregular forms, and the agora became a venue defined by monumental stoas built in canonical orders. Other Peloponnesian cities would eventually come to adopt these new aesthetics, as the monumental stoas in the Elean agora and the South Stoa in the Corinthian agora attest.

In bringing together these Peloponnesian agoras, this study illustrates the need to integrate different models in our conception of Greek commercial and civic space. It highlights the complexities of the Greek agora and the many factors that contribute to its development. Taken together, the Peloponnesian experience allows one to acknowledge that patterns of urbanism are irregular and varied.

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Donald C. Haggis

9 The Archaeology of Urbanization: Research Design and the Excavation of an Archaic Greek City on Crete

Archaeological evidence is accumulating rapidly, providing us with immensely valuable information about changes in population density, settlement distribution and structure, subsistence and trade, social differentiation, and much more... But the rise of the polis entails more than this: it is the history of a relationship between peoples and their communities. To understand this, we need the help of written sources (Raaflaub 1993, 43).

Historical particularism beckons like the girl next door and offers about as much. For archaeologists, history too often means referencing the same set of secondary sources (in English), leaning up against the old barn of the historical approach, or drawing historical analogies so grand they are untestable or so small they would be nothing at all for Mickey Mouse (Kowalewski 2006, 94).

Abstract: The paper examines culture change on Crete, ca. 600 B.C., in an urban context. The purpose is to reassess the current methodological discourse, and the application of site-specific recovery methods and research paradigms in addressing traditional problems of polis formation and urbanization in the Greek Aegean. One aspect of urbanization in the Aegean at the end of the Early Iron Age is nucleation of population, the settlement aggregation and the restructuring of social, political and economic landscapes, giving rise to Archaic Greek cities and city-states. This paper presents a case study of an excavation of one such early emergent center, the site of Azoria in eastern Crete (700–500 B.C.). Within contexts of agropastoral production and consumption in domestic and communal spaces, the material patterns suggest public activities that actively formed civic institutions, mediating social and political interaction and forming mechanisms of community organization and integration.

The Problem with the Archaeology of Archaic Urbanization

In studies of the emergence and form of ancient Greek cities there has been a decided shift in analytical focus from the urban center to its hinterland, probably as a result of the scaling back of large-scale excavation, as well as the growth of intensive archaeological survey in the Aegean since the 1980s. The question of the physical form of the city through time—as an aggregated center or nucleated settlement (Hansen 1997, 9, 54–57)—has become in many respects moot. The Archaic city is too difficult to expose stratigraphically or spatially; in its earliest stages, it was formally and functionally inconsistent, or spatially incoherent; and for the most part, its formal attributes, even if recoverable, are considered irrelevant to understanding social and political questions of the emergence of state-level societies in the classical Aegean. On another

level, early civic architecture, *sensu stricto* as buildings for ascribed magistracies, is hard to define materially except in general terms of vaguely communal or public venues of social and economic interaction (Hansen 1997, 15–17), and with few exceptions, the specific forms or types of monumental political architecture seems hard to pin down until the late fifth and fourth centuries B.C. (Hansen 1997, 55). A related aspect of the question of urbanism is of course its relationship to actual social and political structure. The physical form of urban centers and their development through time may be methodologically irrelevant to serious discussion of the conceptualization of the polis, while any consideration of diachronic change invites necessarily gradualist and macroscale perspectives of both city (Osborne 2005; Wallace 2010a; 2010b) and state (Morris 1991).

Thus, the distinction between the city as a materially comprehensible condition in the archaeological record of the fifth and fourth centuries, and urbanization as a long-term cultural dynamic of the Early Iron Age (EIA) and early Archaic periods, culminating in the sixth century, brings with it a number of problems. Foremost among these is the difficulty in finding, interpreting, and identifying phases of a process in a number of specific and contiguous stratigraphic contexts; and then defining the physical attributes of the city itself, which are nevertheless chronologically, geographically, and culturally variable. Finally, our attempts at understanding the development and physical forms of cities may be incidental, if not also ultimately tangential to understanding the social and political dynamics of city-state formation.

Given our frustration with (or benign neglect of) the study of the archaeology of the early Greek city, it follows that current approaches should privilege material correlates recoverable within broad diachronic and regional scales of analysis, precisely because we have assumed a continuum of development and a diversity of forms and structures (such as buildings and fortifications), as well as types of political organization (e.g., Osborne 2005; Morgan and Coulton 1997). The strictly materialist approach, normally eschewed in recent critical analyses, derives of course in large part from the categorical definition of formal and systemic attributes most appropriate to already fully developed Greek cities of the Classical period, such as settlement size and population density; cultic, civic, domestic or political architecture; articulation and separation of cultic, political, and habitation spaces; extramural cemeteries; economic structure; and inscriptions; and of course the location and relative scale of these various attributes. The potential usefulness of these indices has been weakened in recent studies of Greek urbanization for good reason. Polignac, for example, has argued that any analysis of urbanization as a process, necessarily requires evaluation of evidence of the eighth and seventh centuries (2005, 46, 52–53), amounting to a retrojection of criteria derived from much later contexts—a kind of ideal or notional city—in order to identify individual developing forms or conceptual degrees of urbanism in the Early Iron Age and early Archaic records (Preston and Owen, eds., 2009, 3–4; Osborne 2005, 7; Morgan and Coulton 1997, 129; Morris 1991, 39–40). The

problem with this material retrojection of course is that urbanization is a dynamic cultural process with complex and diverse systemic correlates (cf. Raaflaub 1993, 43). Even if we generally acknowledged a sixth-century terminus *ante quem* for the materialization of the city itself, we link its material form to certain kinds of social and political behaviors, and so perceive it as a continuous and long-term development that is, simply put, hard to pin down materially or stratigraphically. The end result is a kind of arbitrary interpretation of Early Iron Age and early Archaic contexts, singling out and defining certain features and installations that should reflect aspects of notional or “Classical” city-like behavior.

This is the critique of the materialist perspective. Even if we accept uncritically a teleological vision (early versions or formative permutations) of the city, insisting on a number of particular components, the actual definition of those formative elements is seen as simply too varied, arbitrary, reductive, stratigraphically narrow, and spatially inconsistent in any period to provide us anything but the most general conceptual framework (Polignac 2005; Osborne 2005, 13; Morgan and Coulton 1997, 120, 128–129). Also, even though we might recognize the evidence of certain urban features as late as the seventh or sixth centuries (Osborne 2005, 7–10; Polignac 2005, 46; Morgan and Coulton 1997, 121; Morris 1991, 40), the definition of their functions in archaeological contexts, even if plausible or compelling, in and of themselves, does little to explain regionally and chronologically variable settlement systems and structures that constitute the political or cultural landscape (Morgan and Coulton 1997, 121)—the spatially- and temporally-specific patterns that reflect fluid and dynamic sociopolitical configurations and processes (Preston and Owen, eds., 2009, 3; Polignac 2005, 46, 54).

A consequence of this condition of the archaeological record (and our normative developmental paradigms) is that the study of Greek cities has become mired in the limitations of the archaeological record itself, a product and a condition of our own creation, research designs, and decisions in the field; a result of our self-defined research universe, the limitations of our own metanarratives, and our justifiable privileging of epigraphical and literary sources. Even where archaeology does not fail us altogether, we insist on identifying spaces, buildings and contexts for civic institutions derived from written sources that are not always coterminous with, or even relevant to, the archaeological contexts in question. In spite of our historical bent, I think it is important to recognize that the problems we have in defining the Archaic city may also be less methodological than material. That is, we lack archaeological evidence and stratigraphic clarity in the Archaic city itself. Urban features and even definable physical contexts for civic institutions are neither geographically nor chronologically consistent (nor particularly well excavated or studied); and archaeological contexts can only provide single instances of certain forms of human behavior in certain periods. There is also of course the added problem that we still do not conceive of the early Greek city as being materially remarkable. The small scale of most poleis, even well into the Classical period, show few characteristics of large-scale agglomerations

that we associate with urbanization elsewhere in the Mediterranean, and in later Hellenistic and Roman periods (e.g., Bintliff 2012, 217).

We do, however, generally understand what Greek cities looked like because of the big colonialist-style digs of the past century that encouraged the broad horizontal scale of extensive excavation that we need. But I would argue that our research questions have now perhaps outpaced the quality or usefulness of the data produced by the research strategies and excavation methods of these early projects. So while Emanuele Greco is right to point out the irony of the situation, that “if today we can answer certain questions with just a few well-aimed soundings, we owe this to the much criticized extensive excavations of the past” (2009, 115), it is also true that many such questions in fact require first, extensive excavation that is probably no longer financially or practically feasible; and second, properly recovered and documented samples derived from known excavated contexts. Unfortunately many of the latter from older excavations are already long destroyed because of methods, or irrevocably distorted by recording techniques and resultant narratives. Indeed a further irony of the study of the Archaic city is that the increased cost (time, labor allocation, and resources) of extensive excavation is now indirectly related to the development of intensive and problem-oriented sampling strategies, and the increased complexity and study and publication requirements of implementing appropriate and responsible recovery and conservation methods.

This difficulty of actually being able to excavate Greek cities, as well as the entrenchment of traditional discourses based on very limited and distorted data sets, dovetailed nicely with the emergence of intensive and diachronic archaeological survey in the Aegean in the 1970s and 1980s (Osborne 2005, 4). First, survey was a liberating intellectual and practical antidote to the destructive big dig: surveys claimed to ask important archaeological questions that addressed precisely what both new and old excavation narratives seemed to want but could not deliver because of either excavation techniques or narrow sampling: settlement histories and diachronic, environmental, and regional perspectives on cultural and historical landscapes of variable scales. Surveys also boasted that they were non-destructive, and also apparently cheaper and less complicated logistically to implement. While neither of the latter statements is entirely true, it can be said that surveys provided a reorientation of questions that emphasized the relationship between city and countryside in defining the form and function of the city, as both town and economic community. Survey also encouraged an awareness of the effective analytical scales required by our research questions, and the limitations of the existing excavation sample in providing the evidence we need in order to answer questions about the ancient city and its origins. While the efficacy of survey no longer needs to be justified, let alone heralded—it is obvious enough in Osborne and Cunliffe’s (2005) and Owen and Preston’s (2009) recent collections of papers—we still struggle with urbanization as a material phenomenon on the site-level, as a process distinct from concepts of macroscale centralization, aggregation, or nucleation (Polignac 2005; Morris 1991, 39–40).

Emblematic of the shift in orientation by the 1990s is Morgan and Coulton's (1997, 128–129) insistence that since there are no absolute or consistent archaeological criteria for identifying an Archaic site as a polis town, we should instead turn to the region as the effective analytical scale. Emphasizing the polis as a continuum of development (cf. Morris 1991; Hansen 1997; Osborne 2005), their logical conclusion was that it may only be possible to identify a site as a polis town when the city-state itself is already known and located, that is, a site is recognized as a polis in the regional and political sense, and presumably in the historical record. This perspective characterizes the circularity of the problem, and the methodological dead-end in trying to understand, from the standpoint of excavation, the earliest cities as social and political centers. We lack materially consistent definitions of spaces, stratigraphic resolution on synchronic functions or diachronic developments, and meaningful data that we can relate to patterns derived from environmental and archaeological sampling in the region.

Even so, we still commonly accept the formalization of the temple as being an essential aspect of the early materialization of polis identity (Polignac 1995, 31; Hansen 1997, 57; Osborne 2009, 239–241; cf. Wallace 2010b, 282). But we remain rather ambivalent about settlement aggregation, nucleation, and other material forms or installations making up the urban landscape. By saying, as Hansen does (1997, 17), that no urban structures clearly delineated civic institutions—in the sense of political architecture used exclusively by a narrowly defined social or political class—he calls attention to the fluid nature of the communal spaces in Greek cities, which were, perhaps before the late Classical period, by and large, roughly formed and variable in function, depending on context and specific activity rather than consistently identifiable types of architecture. As Hansen and Fischer-Hansen (1994, 37) comment on prytaneia, if Steven Miller knew what one actually looked like, as a type of building, he would have illustrated one on the cover of his seminal work, *The Prytaneion* (Miller 1978). Indeed even more recently, in Crielaard's chapter on Archaic cities in the *Blackwell Companion to Archaic Greece* (2013, 365–366), the temple and agora seem to be the only features of the early urban center with visible material correlates worth any elaboration at all. This analytical thread, and our apparently ineffective search for certain kinds of public spaces, present the early urban landscape as either all civic, in the sense that it generally belonged to the city as a whole; or largely non-civic, as above, in the sense that it must have lacked definitive or generic types of buildings for exclusive political functionaries. Thus our narrative of what the Archaic city should have looked like tends to steer us away from the potential of the middle range to explain the archaeology of communal space, toward a definition the urban sphere.

My argument here is that the close examination of archaeological context might help us come to a more nuanced definition of civic spaces, and a closer understanding of urbanization and urbanism as products of social interaction and cultural production (see Donati; and Stefanakis et al., this volume). By this I mean two things.

First, although Archaic civic institutions may not appear to have had consistent material forms, and their activities could have been carried out in a variety of places, we need nevertheless to recognize that the activities themselves may have consistently identifiable archaeological contexts and correlates. While I am not at all convinced that the current state of the archaeological record is sufficiently well formed to say definitively that Archaic civic institutions do not have comparable physical forms or features (or even building types), as it is normally argued, we might at least find comparable material patterns if we look at actual archaeological contexts of the use of spaces and buildings.

This will entail examining multi-temporal landscapes, and looking beyond the building as a synchronic artifact or monument—the architectural plans and reconstructions that have become the basis of orthogenic and reductive formal typologies in classical archaeology. And second, if we look at the architecture itself as a component of the built environment—that is as parts of contexts rather than formally consistent types of historically-attested or functional architecture—examining patterns of structure and scale, labor mobilization, organization of space, communication and accessibility, use and function, and visual or aesthetic physical forms (such as monumentalization, aspect, and visibility), we might come to a conceptual view of urban space that can allow us to begin to model social activities and cultural processes as long-term patterns of activity and modes of behavior. This would entail studying the structuring of contexts, such as how food and other resources were procured, processed, stored, redistributed and consumed; and how spaces for food and craft production, cult, and domestic and communal activities were integrated and constructed on an intra-site level.

Turning our emphasis away from formal typologies of components of civic space—consistent political architectural forms that predicate the urban character of a site; or a laundry list of a priori features with installations such as agoras, fortifications, council houses, temples, and communal cemeteries—to the evidence of how these spaces functioned, we might begin to visualize the development of urban spaces as culturally and chronologically meaningful components of urbanization.

I am not saying that particular types or forms of civic or religious or domestic architecture are not materially relevant; only that by assessing their archaeological contexts—evaluating material patterns and modeling the use of space—can we begin to grapple with the diversity of contexts, and in our narratives, bring together very different looking configurations of material culture, which seems to be our biggest stumbling block. Furthermore, in assessing urbanization as a process of change, that is, emerging or developing structures or singular punctuated events, we need vertical stratigraphy; samples that permit evaluation and comparison of data through time, as well as a number of contexts that suggest specific activities, behaviors, and social and economic strategies.

Recent excavations at Azoria, an Archaic site in eastern Crete, present an opportunity to examine evidence for settlement restructuring at the end of the seventh

century (Haggis et al. 2011a; 2011b). The question I am asking of these data is whether or not it is useful to think of the stratigraphic changes in terms of social processes: the design and formalization of the Archaic settlement as a self-conscious assertion of regional political identity; as the center of a political and economic region with a definable agropastoral resource base; and as a polis town with distinctive systemic contexts that defined the structure of the community (Haggis 2013; 2014a; 2014b). From an archaeological point of view, I admit that the point of physical transformation or materialization of the city should logically represent only the *terminus ante quem* or end result of a process of change—a peak in a range of developmental cycles, or perhaps one point along a continuum of change. In the current thinking on urbanization and polis formation, this single point should represent a manifestation, or scaling up, of a preexisting community and integrated sociopolitical structure, so therefore largely irrelevant to the concept of city-state formation, which had presumably already taken place. I want to consider challenging, or at least rethinking this perspective.

The Neoevolutionist Viewpoint and Protogeometric-Geometric Crete

A gradualist view of Cretan patterns, fitting remarkably well with the foregoing critique of Greek urbanization, has been eloquently presented by Saro Wallace (2010a; 2010b), who sees a critical phase transition not in the seventh or sixth centuries at all, but in the Protogeometric (PG) period. Although she recognizes a form of political projection and self-consciousness in the early epigraphical evidence of the seventh and sixth centuries, and the existence of self-identified cities as centers of territorial states, she also sees these things as already “well established and stable institutions,” long existing in Cretan polities from earlier periods (2010a, 76). In Wallace’s gradualist view, the Archaic period is a phase of expansion of state territories and inter-polity conflict reaffirming preexisting state-level identity structures. Thus, the Archaic material evidence for the city is important, but fundamentally incidental to the origins and development of the state itself (2010a, 76–77). For Wallace, the late seventh and sixth centuries do not really help us see the process of change beyond the formalization of preexisting social structures encouraged by territorial expression and inter-site interaction. The narrative is both vivid and compelling, but even though she acknowledges formal changes in the seventh or sixth centuries, she downplays both the evidence and the ultimate importance of these, arguing in the end, like Morgan and Coulton (1997) before her, that there is no clear or meaningful division between her PG sites and the Archaic city—between the proto-polis and the polis. In a developmental or structural sense (2010b, 341–342), this position echoes the status quo, the mainstream gradualist

points of view outlined above (Osborne 2005; cf. Preston and Owen, eds., 2009, 3). Furthermore, Wallace pays tribute to the importance of the physical morphology of Archaic urban centers in reinforcing and encouraging the success and growth of emergent Greek poleis, but for Crete, she sees a kind of material restraint, which is a commonplace metanarrative constructed by most historians and archaeologists working in Archaic Crete today (e.g., Whitley 2009, 290; Erickson 2010, 307). While special-function buildings serving supra-household functions existed in both EIA and Archaic contexts (Wallace 2010b, 279), the lack of material evidence—such as zones of identifiable civic buildings—suggests to her the conservatism, stability, and continuity of entrenched sociopolitical institutions as well as the limitations of physical terrain, into and beyond the Archaic period (2010b, 282–283).

In terms of the archaeology of urbanization, the foregoing is surprisingly similar to the view derived from coarse site chronologies and morphologies of intensive survey with similarly ambivalent views of the importance of the material definition of the urban center itself. In a way, the polis is merely an aggregated settlement had already long existed, conceptually, structurally, and physically from the tenth century on. The ninth and eighth centuries should then represent periods of development and phases of entrenchment of different modes of economic and political behavior, the formation and consolidation of clans as corporate groups reinforcing their links to the landscape, and control of both people and surplus. But the Archaic transition itself is understood as a *continuation* of these systems, rooted in these preexisting structures, and appearing as less of a punctuated phase transition or abrupt instance of positive systemic feedback. In the end, the artifact of the Archaic city is incidental to this protracted pattern of stable settlement nuclei, and its form is a material enhancement of successful examples of preexisting social and political structures.

Wallace's insistence on an urban-model for PG aggregated settlements is intriguing, but even more so are the implications of the motivations of a stratified elite to concentrate in these EIA polities. The conscious construction of the Cretan city (centralized residences of prominent kinship groups) becomes in Wallace's picture, an active social and political process (2010a, 78) in which the maintenance of a dominant ideology is both a result of the nucleation of settlement as well as a driving force for social negotiation and material reproduction. This is an important contribution for studies of ancient urbanization. But for Wallace it must have happened in the tenth or ninth centuries, considerably earlier than the generally accepted picture of change in the seventh century Aegean, with cities reaching a fully developed material form by 600 B.C. On Crete, this phase change might also account for the widespread discontinuity of the sixth century on the island, our so-called "Archaic gap" (Kotsonas 2002). While Wallace and I might agree on the concept of a phase-transition in the emergence of post-Bronze age Cretan polities, I think we probably disagree on the chronology and critical nature and dynamics of such a change.

The bigger problem we face with Cretan city-state formation (and the Aegean in general) is that the polis center is normally perceived as not merely a bigger version of

a town or village, or simply a more elaborate system of social organization or government, but a fundamentally different kind of sociopolitical behavior. As Yoffee (1997, 261) has emphasized, the city-state creates new arenas for social interaction, which are themselves products of that urban interaction. And it is the material evidence for this new intra-site social behavior that interests me. Our problem on Crete may be that the complex interrelationships of prominent kin groups that Wallace talks about are indeed suggested in the EIA archaeological record, but her understanding of the process of change stands somewhat in opposition to Yoffee's normative model. That is, the transition to urban configurations looks like a scaling-up or merely an increase in size or scale of elaboration. And of course the embeddedness of the kinship group as a social and political actor in Cretan cities confounds our usual picture of state formation, in which the apparatus of governance itself should be divorced from such archaic structures. So if the Cretan polis is merely a scaling up of entrenched social and political interactions and institutions, at what point, and to what end, is there an invention of the urban arena for such interactions, the city as a kind of invention or reinvention of itself (Yoffee 1997, 261)?

I think that this urban invention is not only a critical cultural phase transition, but is absolutely essential in mapping the form and history of Cretan cities and sociopolitical structure into the Classical period. That is, even if we acknowledge the consolidation of underlying structures throughout the Early Iron Age, the material elaboration of the city in the Archaic period is not only the articulation or expression of this structure. The physical process of constructing the built environment and new venues for economic and social interaction catalyzed and internally intensified the formation or crystallization of a new kind of sociopolitical identity. The construction of new buildings was a deliberate and active process of social transformation that needs to be explored and explained. The implications of labor mobilization, resource allocation, and spatial interaction alone suggest a radical restructuring of the cultural landscape. I would argue that the material indices of the urban sphere, that is the actual building of the city, are not simply a scaling-up, or part and parcel of a gradual nucleation and social segmentation of EIA aggregated settlements, but an active and deliberate construction of identities, political power, and arenas for their negotiation that were neither required nor took concrete form before the seventh century B.C.

My purpose here is not to deconstruct the idea of PG aggregated settlements being socially or politically significant (or even poleis), but to balance this view with questions of both horizontal and vertical stratigraphic discontinuities. I would say, however, as an aside, that in order to deal critically with the idea of PG or Geometric urbanization, we would need to know the actual structure of the settlements of that period—that is, what these ostensibly large aggregates really looked like. In fact we might have less evidence of tenth- and ninth-century settlement on Crete, than we do of sixth-century; and certainly insufficient data to begin to engage the meaning of patterns of aggregation or nucleation derived from survey.

On the regional scale, the changes in settlement patterns, and the appearance of new large PG sites are neatly presented by Nowicki (2000, 241–247) and Wallace (2010a), and they are evidently important indications of a transition in settlement structure in the tenth century. But, it is important to keep in mind both the limitations and telescoping perspective of survey. Although contiguous scatters of pottery may extend across thirty or forty hectares at some sites, the actual distribution of material remains, their scale and meaning, by period, remain to be elucidated or at least critically evaluated, as does the evidence of continuity into the seventh or sixth centuries. We still do not know if these sites were urban-like nuclei at all; nor can we visualize the physical forms of the buildings themselves, their periods of occupation, distribution across the sites, or the configuration of non-domestic installations. Do these sites, ranging from ten to forty hectares, such as Papoura, Kalo Chorio Maza, Krousonas Koupo, Rotasi Kephala, or Ligortinos Kephala (as in Wallace 2010a), represent contiguous building, separate groups or neighborhoods with in-field land or open areas in between them, or perhaps discrete clusters of buildings, and at what scale and in what periods? While it is difficult to reliably disaggregate PG and sub-Protogeometric (Geometric) pottery from Late Minoan (LM) IIIC and Late Geometric (LG), in surface collections, except in certain fine ware forms (such as kraters, cups, or skyphoi), in my experience working on the Kastro at Kavousi, PG surface samples never seem to form a reliable indication of the variability of subsurface or original surface distribution. I do not doubt the presence of a PG phase on these large nucleated sites—Nowicki and Wallace present the evidence for it—I just do not understand its distribution and the form of its contexts, and ultimately its meaning.

But by taking refuge in the lack of evidence, I am not trying to prove Wallace wrong or simply construct a moot point. I would only say that the evidence that we do have from actual excavation, derived principally from the Kastro at Kavousi (Coulson et al. 1997), shows a remarkable stratigraphic discontinuity marking the start of PG; and this perhaps accords well with aspects of Wallace's view of an EPG transition—the change clearly involved settlement rebuilding and expansion. But on the Kastro, the buildings were constructed tightly within the physical armature of the LM IIIC settlement. A variable pattern is demonstrated at Azoria where some buildings appear to have been abandoned in LM IIIC, while others continued in use, probably continuously modified throughout the Early Iron Age down into the seventh century. While the evidence at Azoria is clouded by the radical rebuilding phase, sometime before 600 B.C., the Kastro shows clearly the long-term development of proximate household groups—discrete clusters of related nuclei forming relatively static constructions well into the seventh century.

Thus the actual global discontinuity in the Kavousi region comes in the latter part of the seventh century, and it represents a tangible break from a pattern of gradually developing small nuclei on various scales: proximate household groups or household clusters on the site level, as well as the clustering of sites on the regional level, probably reflect different static kinship-corporate groups. Their configuration in the

landscape will have depended on the physical terrain of the sites themselves, in-field land and water resources, cult centers, and proximity to fallow and grazing. A disruption of this pattern does not occur until the transition from the seventh to the sixth centuries with wide-scale abandonment and relocation of both settlement and cemeteries, and a tendency toward nucleation and centralization of settlement, but also the physical transformation of the site of Azoria.

The Construction of the Archaic City and the Problem of Settlement Structure

My interest here is in reconsidering the value of a materialist perspective for the early Greek city, exploring an example of urbanization as a physical process of cultural production, and invention, or from the gradualists' point of view, reworking of the urban landscape. So while one can argue that the essential social order that defined the structure of the community was in place before the construction of the city, I think that the process of construction was a radical re-formation of economy and community identity and indeed the political experience and consciousness of its inhabitants. Regardless of whether or not this material change was coterminous with a threshold of global sociopolitical change—expanding territorial interests, inter-polity competition and increased warfare—the critical scale at which inter-site and interregional economies were functioning in the Archaic period remains to be explored. If we consider the material elaboration of the city as only the end result of a gradual process of intensification of interregional interactions, or a kind of enhancement of preexisting modes of social or political expression, then we will never be able to move the discourse beyond the reductive circularity of the systemic framework of models like peer-polity interaction.

At the end of the seventh century, the act of rebuilding Azoria represents transformative sociopolitical behavior, a significant reconstitution of Iron Age culture, and a conscious strategy of cultural production. The question is the ultimate usefulness of seeing the creation of new forms of community interrelationships and new patterns of economic and social interaction as passive responses to regional inter-polity social and economic competition or conflict, or even as the external projection of preexisting power hierarchies or identity structures to similarly-forming regional polities. If the new city is the fundamental reconfiguration and articulation of interrelationships on the intra-site level, I wonder if the act of constructing the city itself is not also an important catalyst for inter-site interactions and politics.

Although we might predict a level of complexity by our perception of settlement size, it is perhaps not as much the perceived scale of the nucleation as the character of the aggregation, that is, the actual structure of the settlement on the ground and through time. The form of settlement is conditioned by terrain, topography, resource

availability and numerous cultural variables; but the specific structure of the settlement, on the site-level, and indications of intra-site communication and interaction, should provide a useful framework, or at least a baseline, for modeling the function of aggregated sites, and in this case, the meaning of both Early Iron Age and Archaic nucleation. At the site of Azoria, excavation has revealed four fundamental changes to the structure of settlement that we can now place in a stratigraphic horizon at end of the seventh century B.C. Although we are working to refine the chronology of this change through stratigraphic soundings, a date in the last quarter of the seventh century accords remarkably well with Kotsonas's (2002, 62) inferential date of about 630 B.C. for initial transformations in central Crete.

The first change is a widespread rebuilding of the site, involving the reconfiguration of the plan of the settlement and the reorganization of domestic and communal spaces. There is evidence for a significant increase in the scale of construction and the labor investment in building practices. The second change is in the form of residential space, which represents a shift from gradually developing proximate or co-residential compounds (or house clusters) that characterize the Early Iron Age pattern in the region, to large single households that are complex in form and integrated into the overall plan of the center. The appearance of the Archaic houses, in most cases clearly concealing or destroying the underlying Early Iron Age settlement remains, indicates fundamental changes in the way in which households were constructed, perceived, and operated as social actors in the community; and as economic and political agents in the region.

The third change is the construction of public buildings. These are new architectural forms and new kinds of buildings, occupying the center of the site, and forming a zone of communal space extending across much of the west and south slopes of the South Acropolis. We are still exploring the spatial limits and architectural details of these buildings, and their formal and spatial interrelationships; but it is clear that they were designed to accommodate large groups of people, and centralized both the storage and preparation of food in considerable quantities.

The fourth change is internal, contextual and behavioral, in a sense informing our picture of the function of new settlement and building forms. It involves changes in the way agropastoral resources were produced, mobilized, stored, and consumed. Although we normally qualify the changes as economic in the sense of the management of agricultural staples and surpluses by various sectors or levels of a presumably agroliterate sociopolitical structure, the changes in foodways on the level of the household and civic building may help us to understand new patterns of intra-site interactions and relationships that formed the social and political organization of the city.

Although each of these changes in structure, in the seventh century, might indicate on the surface of things a scaling-up of preexisting or formative modes of behavior, I think that this is first yet to be proven archaeologically. The changes may, however, serve to demonstrate new ways of structuring, organizing and experiencing intra-community relationships. I would argue that the process of constructing these

spaces, and the city itself, created a new political consciousness of place, and established or reified new patterns of sociopolitical interaction. The phase transition was a purposive redirection of resources and reshaping of power relationships in many ways in direct opposition to the Early Iron Age settlement structure and regional community identity. Thus, I see urbanization at Azoria as not merely a new material expression of the regional community, catalyzed by increased interregional and extra-regional economic interaction and territorial expansion; but rather as a fundamental transformation of ways of living and interacting. In the experience of the inhabitants themselves, the acts of abandonment, aggregation, destruction, construction, and the physical restructuring of the built environment were dynamic forms and expressions of the processes of social negotiation and political reorganization.

If *poleis* (or urban polities) existed from PG to LG on Crete, there is no compelling archaeological evidence for the kind of active and dynamic restructuring of social and political space that we see in seventh century. In fact, the stability and constancy of EIA settlement systems might indicate the opposite to be true. These were by and large long-lived aggregated settlements, with static and stable household groups and communal buildings of the scale of the hearth temple or house temple (Prent 2007)—the latter, in most cases established as early as PG, is the most interesting as it reflects both the longevity of the Early Iron Age community, and the deep history and entrenchment of its social and political organization. It perhaps comes closest to a supra-household institution, seamlessly integrating community cult in socially-segregated dining rooms that probably combined ritual and political activities. Although we need more evidence from excavation to make this argument, well known archaeological correlates are apparent throughout the island: the shift in the locations of temples and cult places; the construction of inscriptions into temple walls that face out onto agoras or public squares; the abandonment of cemeteries and changes in patterns of necrotaphic consumption; the rapid scaling down and eventual abandonment and relocation of settlements are all indications of a major and surprisingly rapid restructuring of the cultural landscape in the eighth and seventh centuries (Kotsonas 2002; Gaignerot-Driessen 2013; forthcoming; Haggis 2014b).

The Archaic Houses

The Archaic houses at Azoria are new foundations in the late seventh century. They seem to form single households, with clearly defined food-processing areas (kitchens), storage facilities (storerooms), and multi-purpose living rooms (halls) (Haggis et al. 2011b). Not only has the size of the residential unit increased, but the organization of household space has changed as well. A fascinating development is the abandonment of the central “hearth-room,” the combined living, working, and food-producing area of Late Minoan IIIC–EIA, and later Hellenistic houses on the island.

The Archaic buildings are spatially complex with articulated functional areas. The halls, evidently multipurpose rooms that were used for drinking and dining, mediated access to storage facilities and the communication between storage and food processing rooms. This tight internal control of storage indicates both the practical and social-symbolic importance of pithos storage, while emphasizing the use of halls for food consumption and redistribution, rather than household industries or primary processing.

Another interesting characteristic of the Archaic houses is that they are formally integrated into the overall structure of the settlement, as it was conceived at the end of the seventh century. Houses were physically built into an armature of concentric spine walls that were constructed systematically across the site, creating distinct but interconnected zones of civic and domestic building. The critical difference here with EIA settlement structure is that the house itself is no longer part of an agglutinative compound, or block of related households, but is now physically distinguishable, relating individually and independently with the broader space of the urban center, rather than dependently through a house cluster. This break from the EIA co-residential group indicates an important social change and reconstitution of the household's identity and relationship with the broader community. Moreover, the formal integration of single residences into a coherent and unified city-wide plan means that there was a direct physical and social relationship to new communal buildings, changing the spatial context of interaction between related households.

The houses on the South Acropolis form a distinctive spatial pattern (fig. 9.1). The Northwest Building, Northeast Building, and South Building 2 (currently under excavation), are positioned on the periphery of the South Acropolis, forming, if not defining the physical edges of the central civic space, which is comprised of a core of contiguous architecture on the south and southwest slopes: the Communal Dining Building, the Monumental Civic Building, and the Service Building (Haggis et al. 2011a). Partly excavated houses on the north and southwest (the North Buildings, and the lowest terrace of the Southwest Buildings) serve to fill out the pattern of residential space ringing the communal complexes. We are still expanding excavation within both civic and residential zones, with the goal of recovering more of the buildings as well as clarifying the communication patterns between domestic and public areas of the site. What is clear is that the urban center is composed of a nucleus of contiguous structures on the peak and immediate south and west slopes of the hill, with the houses closely placed but at the edges of this zone. In terms of architectural definition and spatial organization, it is important to emphasize that houses are constructed along with the civic complexes, and both are deliberately integrated into the unified design of the South Acropolis. At Azoria, it is clear that domestic architecture is "civic," in the sense of being built as part of an overall plan and community investment in the construction of the urban environment.

The best-preserved examples of houses—the Northwest and Northeast Buildings—each have large halls, spacious kitchens equipped with built hearths, and dedi-



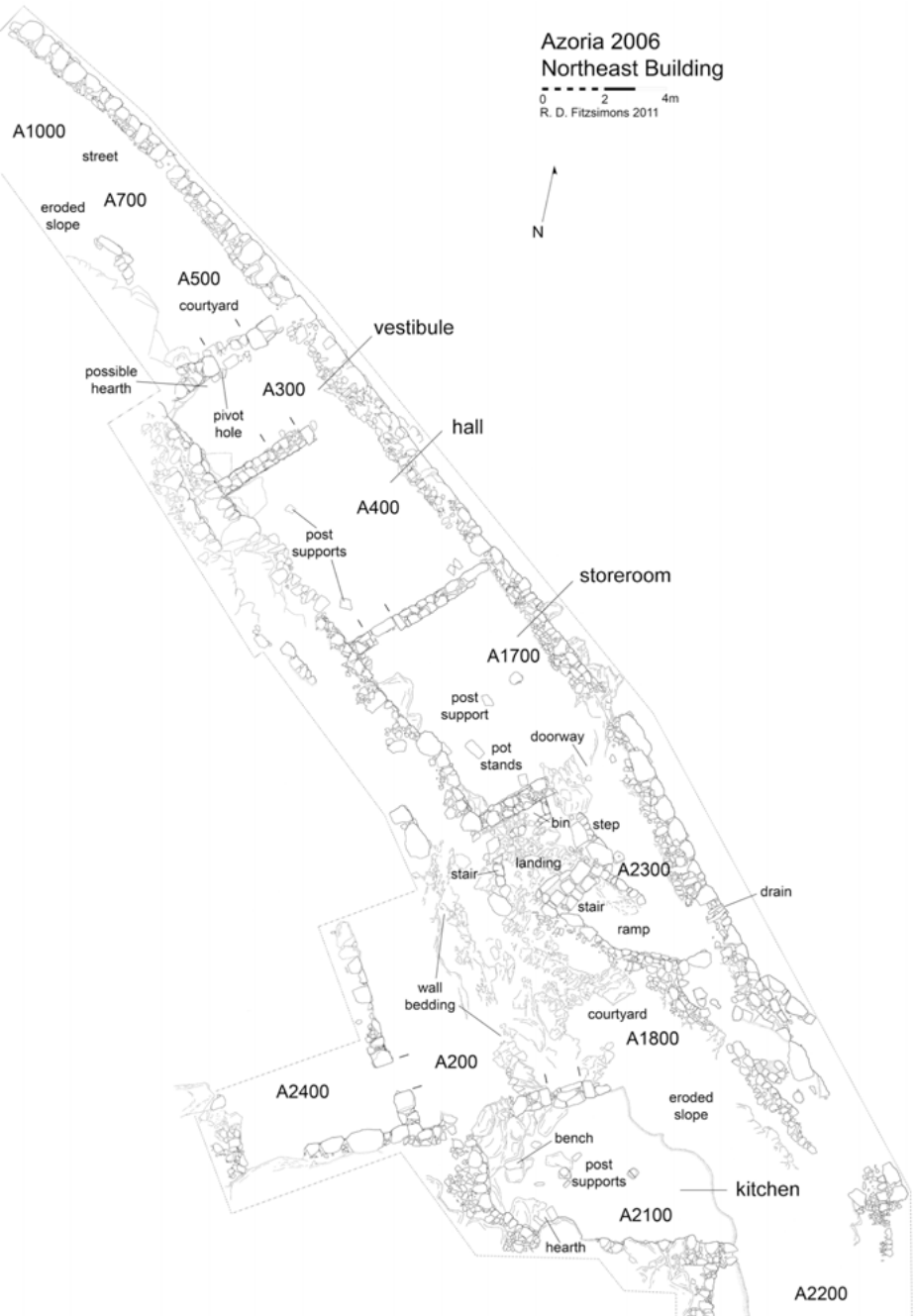


Figure 9.2: Northeast Building (drawing R.D. Fitzsimons).

cated storage facilities, and while there is evidence for lateral cycling and curation at the time of the early fifth-century destruction of the site, there are sufficiently preserved assemblages to establish regular patterns of use. The total or maximum storage capacities of the houses at the time of destruction are admittedly difficult to determine because of preservation; abandonment formation processes; the variety of different sizes and types storage vessels recovered (including pithoi, smaller jars, amphoras, and hydrias); the likelihood of a range of foods that may not survive archaeologically, and perishable containers, such as woven baskets, cloth sacks, animal skin and wooden containers. What is clear, however, is that the storage interests and capabilities of these buildings far exceeded normal self-sufficiency of individual households, suggesting that the social and economic structure of the house-as-household was far more complex than that of a normative agriculturally-based nuclear family (cf. Foxhall 2003, esp. 85). In general, in the classical Aegean, there is tendency to frame archaeological evidence for agricultural behavior in terms of local household-oriented “subsistence” (as in Raaflaub 1993, 43), creating a kind of conceptual opposition to economies of scale, such as regional or extra-regional exchange or “trade.” These reductive and opposing frameworks tend to deemphasize or ignore the fundamental household-basis for the agricultural economy of the ancient city, and indeed beg the question of the structure of the household as a social and economic unit.

The storeroom in the Northeast Building (fig. 9.2: A1700) had only two well-preserved pithoi broken on the floor in the southwest corner (fig. 9.3), but there were also fragments of at least four others in the room at the time of abandonment, along with remains of grapes, olives, and various grains and pulses. The size of the room, over thirty-three square meters in area, and the location of stone-slab and worked bedrock pithos stands indicate that the space was meant to accommodate many more storage jars. It is about two thirds larger than the best-preserved storeroom in the Service Building (B700) (fig. 9.1), which contained at least eight pithoi as well as a number of amphoras *in situ*. Thus for A1700 we estimate a maximum number that could well exceed twenty such vessels, or a volume of about 6,000–8,000 liters, using Christakis’ estimated 300–400 liters for Archaic jars at Prophetes Elias (Galanaki et al., this volume).

In the Northwest Building, there were two storerooms of similar size, probably for separate dry and liquid storage (D700E; D1600-3) (fig. 9.4). The combined area of these rooms indicates total committed space roughly equivalent to that of A1700 in the Northeast Building. The D700 storeroom had remains of four pithoi, with two pithos stands *in situ* (fig. 9.5), but also a variety of preserved foods, including olives, grape, barley, chickpea, poppy, and figs. The D1600-3 storeroom at the south end of the building, probably for liquid storage, had stands for eight pithoi (fig. 9.6), but room for at least nine jars, several (at least six) of which were found *in situ* fallen from their stands (fig. 9.7)—the number and spacing accords well with the B700 storeroom, which was considerably smaller. Christakis’s estimated pithos volume is within the range of the average sizes of jars at Azoria, though we have recovered vessels in



Figure 9.3: Northeast Building (A400): collapsed pithos in storeroom (photo M.S. Mook).



Figure 9.5: Northwest Building: D700 storeroom (photo D. Haggis).

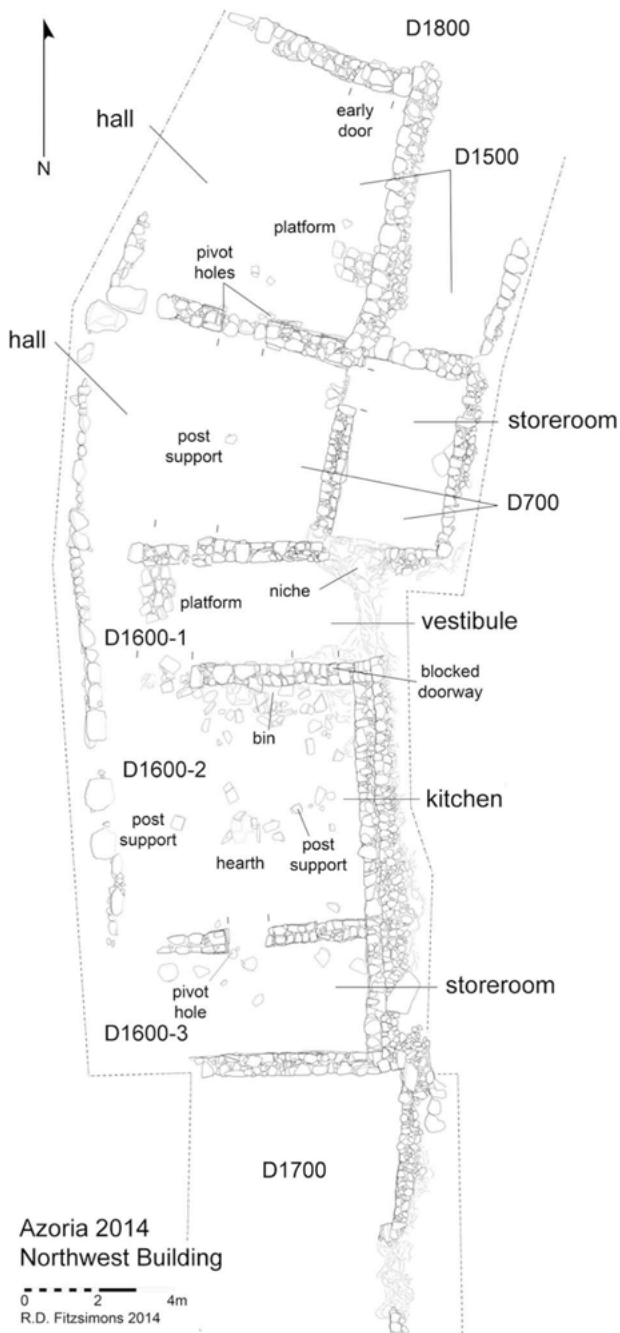


Figure 9.4: Northwest Building (drawing R.D. Fitzsimons).



Figure 9.6: Northwest Building: D1600-3 storeroom (photo D. Haggis).



Figure 9.7: Northwest Building (D1600-3): collapsed pithos on stand (photo D. Haggis).



Figure 9.8: Pithos from domestic storeroom in B3600 (photo C. Papanikolopoulos).

houses that had capacities exceeding 500 liters. For example, a well-preserved pithos imported from the neighboring Archaic city of Istron, in the storeroom of a house in the South Slope Buildings (B3600), has a volume of 727 liters (fig. 9.8). It is important to remember that these storage estimates are several times greater than what we expect of the surplus requirements of a single nuclear or stem family for several months—and they represent a conservative minimum household capacity of houses at Azoria. In addition to the dedicated storerooms, the other rooms in the houses,



Figure 9.9: Northwest Building: D1600-2 kitchen (photo D. Haggis).



Figure 9.10: Northwest Building: D1600 kitchen and storeroom from north (photo D. Haggis).



Figure 9.11: Northwest Building: D700 hall and storeroom (photo D. Haggis).

such as kitchens and halls, also contained pithoi, along with a wide range of smaller-scale vessels such as table and transport amphoras and hydrias.

The kitchen in the Northwest Building (D1600-2), for example, with a series of at least fifteen pithos stands at its northern end (figs. 10.9, 10.10), could conceivably have contributed a significantly larger food storage capability than the storerooms alone, perhaps increasing the total volume for the house by a third or more. As an estimate, the kitchen of the North Acropolis Building had five pithoi, four transport amphoras, two jars, and three hydrias in use at the time of destruction within the work space of the room (Haggis et al. 2011b, 466–477).

Kitchens in the houses are committed food-processing spaces, and normally separated from the halls by a transitional room, storeroom, or courtyard, or all three, in the case of the Northeast Building (fig. 9.2). Storerooms normally communicate with the halls directly. We have attributed this storeroom-hall connection with the management, control, and display of agricultural goods that would have been brought into the houses in semi-processed form, for shorter-term storage, redistribution, meal preparation, and even immediate consumption (fig. 9.11) (Haggis et al. 2011b, 482–483). The implications of the food-storage capacity of the houses are far reaching. It means that the occupants were storing considerable quantities of consumables not only for daily needs of the immediate residence, but for more public (supra-household) or formal drinking and dining within the halls themselves, and most likely for redistribution to dependents and the public stores of the Communal Dining Building and Monumental Civic Building. It also indicates that a good deal of primary surplus



Figure 9.12: Northwest Building (D1500): drinking cup on floor (photo D. Haggis).

storage and processing, and even various scales of distribution, were conducted by dependents living and working some distance from the large urban residences that emerge as estate managers and consumers rather than primary food producers. While Christina Tsoraki's study of the ground-stone tool assemblages is indicating heavier primary processing (in the use of large querns and grinders) in household kitchens than in civic kitchens, Margaret Scarry's recovery of plant remains emphasizes a diverse range of foods, probably surviving as evidence of ready consumables (like oil, wine, fruit, and nuts) and final meal preparation. Large-scale primary grain staple storage is not yet in evidence, perhaps reinforcing the idea that the household surplus does not represent normal long-term subsistence concerns of individual families. The study of food processing implements, pottery, and food remains is in progress, but the patterns to date suggest that houses were socially and economically significant in the construction of civic space as a specific form of urban community—the emphasis is less on the social unit of the nuclear family than on an economic unit and symbolic reference to a larger-scale corporate structure of household.

The halls of the Archaic houses are large in size, and lack permanent stone-built features—we assume that wooden benches, chairs, tables and bedding of various kinds might have been used in these spaces. The artifact assemblages of these rooms are mixed, but there are no indications of permanent or impermanent hearths, food processing at any scale, or dedicated industries requiring survivable tools, implements, or installations. Margaret Mook's study of the pottery from these spaces demonstrates very clearly a recurring pattern of kraters, cups, skyphoi, table

amphoras, hydrias, lekanes and cookpots—with background traces of food debris. The partially-preserved hall in B3400 on the southwest slope included three hydrias, an oinochoe, a fine bowl, a black-gloss skyphos, and at least eight cups. The well-preserved assemblage in the hall of the North Acropolis Building (E200) had an Attic black-gloss skyphos, a black-figure cup, seven other cups, a Lakonian krater, an olpe, a flask, a fine lid, a hydria, and five chytrai (including two Aiginetan types). While the assemblage from the north hall (D1500) from the Northwest Building (fig. 9.4) has not been completely studied or conserved, there was a tripod basin, an extremely large Lakonian-inspired krater, a pedestalled krater, a cylindrical stand, several black-gloss high-necked cups (fig. 9.12), a small pithos, a jar, hydria, a black-gloss jug, and an imported marble louterion (fig. 9.13). A clear pattern that is emerging from the excavation of halls is that a primary function of these spaces was drinking and dining, with visual and spatial reference to storerooms and pithos storage. Indeed the presence of kraters, including pedestalled and imported forms, as well as fine black-gloss and Attic wares, suggest formal sympotic activities, that in Crete, we usually relegate to public contexts such as the *andreion*.

The picture of the Archaic houses, at least at this stage of our work, leads us to conclude that the construction of domestic space was a critical process of urbanization. It is not only the spatial complexity of the forms (or social/functional segmentation), or their material elaboration, but indications of a new social and economic organization that recognized and articulated the urban dwelling as an important economic component in the emergent community. The contexts under study have led us to focus on how the household interacted with its broader political and agropastoral environment. In general, the condition of houses at Azoria resonates with Wallace's idea of the formation of elite residences in city centers, which should have belonged to an exclusive citizenry, as a conscious strategy of building or maintaining political and economic power (Wallace 2010b, 336). What Azoria also shows is that the sudden growth in size and complexity of the seventh-century house is mirrored in economic changes suggested by distinctive storage, processing, and consumption patterns. From the perspective of the household, urbanization on Crete may be seen as an active crystallization or perhaps institutionalization of residential groups. Formally integrated into the architecture and physical rebuilding of the South Acropolis, and placed strategically to surround the nucleus of civic buildings (fig. 9.1), the houses would have been potent spatial and visual signifiers, actively serving to shape a new urban landscape, and to codify the sociopolitical identities and economic functions on intra- and inter-household levels. We have argued that the economy and social roles of these urban residences were geared toward management, redistribution, and ritual consumption of food, involving the organization of dependents at the periphery, the control of land and primary production; and the mobilization of foodstuff through the houses and into venues of public rituals of assembly, dining and sacrifice.



Figure 9.13: Northwest Building (D1500): louterion from hall (photo C. Papanikolopoulos).

The Public Buildings

The building of a city at Azoria in the last quarter of the seventh century involved not merely a change of scale or economy, or an intensification of preexisting power hierarchies, but an utter reconstitution and reconstruction of residential and public space. The new urban houses are only one part of a dynamic physical transformation of the landscape—a conscious and deliberate act of recreating the household as an integral and inextricable part of the overall settlement structure. Domestic architecture is incorporated into the system of spine walls, which form a unified structure tying together both civic buildings and residential space. The houses are part and parcel of the urban structure; in the architectural fabric of the city, they would have been visually indistinguishable from civic buildings, except by size and location.

The Archaic phase transition brought with it major changes in the way the inhabitants perceived and constructed their built environment, altering the way that people lived and worked. It also certainly involved a significant cognitive change as well, a reshaping of their settlement history and interrelationships, and how they would have construed and projected their identity and connection with the place. The economy of the Archaic household seems to have been dispersed, multi-local, and centrifugal character. In its multi-focal structure, it would have had to reach out beyond the walls of the house unit in order to connect itself to dependent houses, land, labor, and material resources, in a way creating a more connected rather than integrated urban periphery, and requiring the management and negotiation of the broader social and economic landscape. It also created a weaker and perhaps less stable and mobile corporate identity within the broader community, with households more closely linked to centralizing or “civic” institutions. Evidence for this link between corporate households and the civic institutions of the city is found in the tightly integrated layout of buildings along spine walls, and their close proximity to new buildings used for supra-household activities.

The location, plan, and organization of space within the public buildings points to communal reintegration within carefully regulated systems of participation. An historical perspective would suggest a form of inclusion that necessitated tight controls privileging a narrowly defined citizen class (Erickson 2010, 304–305; Small 2010)—the participants were most likely derived from the urban residences described above. Furthermore, the juxtaposition of civic buildings at the site, the Communal Dining Building and Monumental Civic Building, suggest different scales and different levels of integration within the notional city center (fig 9.1).

The Communal Dining Building and Monumental Civic Building share certain essential functions, such as large-scale storage, food preparation, communal dining, and public ritual. The two buildings—as we have defined them at this stage of excavation—are actually contiguous constructions occupying the west and southwest slope of the South Acropolis. It is also possible that a large rectangular Archaic building on the summit of the hill, excavated by Harriet Boyd in 1900 (fig 9.1), could be an

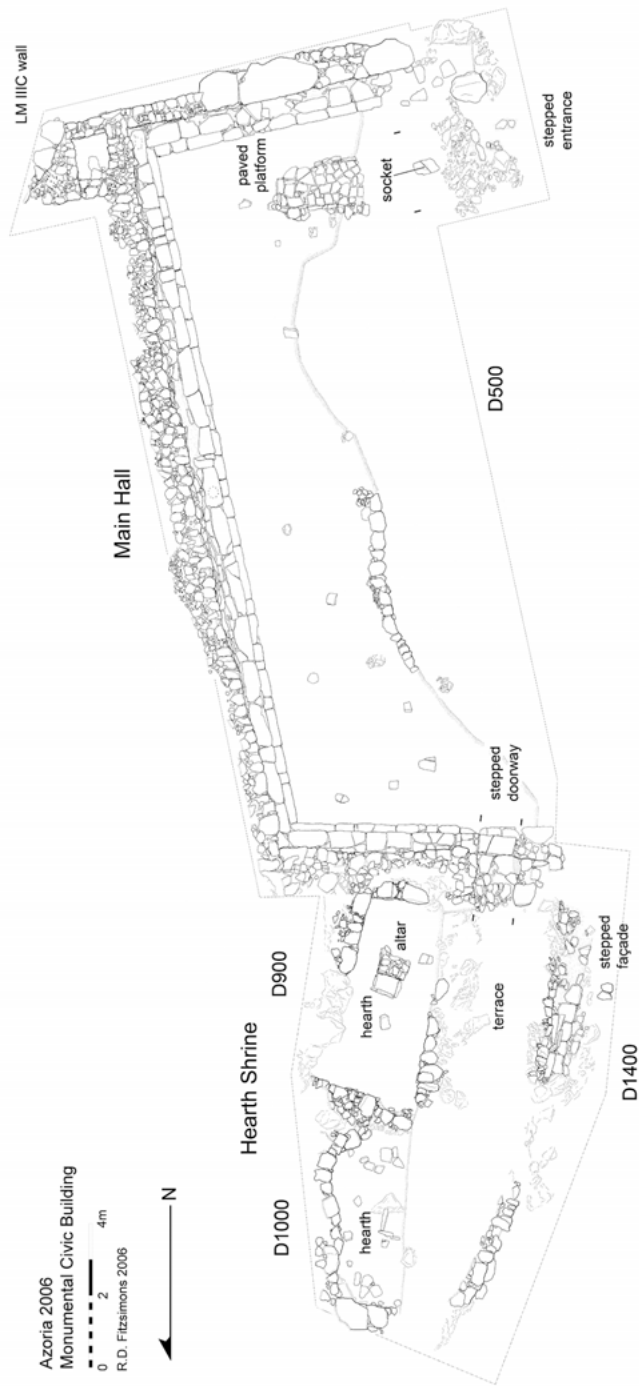


Figure 9.14: Monumental Civic Building (drawing R.D. Fitzsimons).

extension of this complex, but none of the finds from Boyd's work, and nothing of the stratigraphy of this structure survives today. What we can say is that the civic complex is a cluster of spatially-related buildings, essentially the Communal Dining Building, on the upper west slope; the Monumental Civic Building, immediately below it on the slope; and the Service Building, which because of its proximity and access by a street, communicated directly with the main hall of the Monumental Civic Building. We are still in the process of excavating within this civic zone, so any presentation or interpretation of the overall plan or the relationships between buildings must remain preliminary.

Although we are reasonably certain of the extent of the Monumental Civic Building—the main hall (D500) and shrine building (D900–D1000) (fig. 9.14)—it is clear that the adjoining Service Building was much larger, and had at least two major architectural phases. In general we can say that it consists of a large main hall (D500), about 200 square meters of roofed space, with an elaborate stone-built stepped bench (fig. 9.15), as preserved, running along the north, south and east walls. A doorway and stairway in the north wall led to an upper terrace that contained a two-room shrine, one room with a hearth and bench altar (D900), and the other an adjoining food preparation and store room (D1000) (fig. 9.14). The finds within the main hall suggest public dining activities: a lekane and situla found on the floor containing stews (chickpeas and goat and another with wheat, broad bean and grape); remains of roasted sheep, goat and other animals; cups and a hydria. The direct link to the Hearth Shrine on the north, and three kernoi found within the main hall itself are also certain evidence of ritual functions. Even though it is clear that cult activities are associated with the building, the marginalization of such installations and the emphasis on public assembly and feasting point to other forms of communal congregation. Drawing broadly on historical analogies for activities in Greek civic buildings, it is easy to visualize the integration of cult components in public dining contexts of the *andreion* and *prytaneion*. While we might interpret the space in D500 as a public or civic dining hall, it is clear that this would distort the evidence and mask the complexity and importance of its functions.

The adjacent Service Building, immediately to the south of the main hall (fig. 9.1), complicates the picture even more. Here are a series of large-scale food-processing and storage areas: minimally two kitchens with curbed hearths (B1500; B2200); three storerooms (D300; B700; B1200) (fig. 9.16); and an olive press installation (D300). There are at least another four rooms of this complex preserved to the south and east, whose condition and state of excavation do not permit us to assign specific functions. The minimum storage capacity of this building, based only on the number of preserved and identified pithoi (and the same average capacities that we used for the houses), is over 8,000 liters—though it is important to recognize that we have not yet computed the actual sizes of the largest pithoi or the storage potential of small jars and transport amphoras, which are also numerous in the assemblages. The range of foods included wine and olive oil (indicated by intense burning patterns around



Figure 9.15: Monumental Civic Building: main hall from north (D500) (photo D. Haggis).

some pithoi, and the presence of wine lees), but also whole olives, chickpea, lentil, fig, pear, almond, grapes, and wheat and barley. As with the houses, most of these foods appear to have been brought into the complex for final-stage processing and consumption—we assume that the assemblage indicates short-term storage of for meal preparation, that is, the regular cycling of foods through the complex for specific feasting events conducted in the adjacent hall of the Monumental Civic Building.

The Communal Dining Building, on the slope above the Monumental Civic Building, is evidently much more complex architecturally than its neighbor (fig. 9.17). At this stage of work we cannot determine its full size or complete plan. We had originally exposed a core group of rooms: dining rooms and a cult room (A800, A1900N, and A2000) on an upper terrace; and a row of interconnected kitchens (A1600, A600N, A600S) and storage rooms (A1200, A1400, and A1500) on the terrace below. This building was however much larger—we realized at the time of excavation that we were missing at least half the building, to erosion on the western margin of the lower terrace; to later Hellenistic rebuilding on the hilltop, and the limits of our own excavation sample on the lower western and southern slopes of the peak.

Storage in the Communal Dining Building (fig. 9.17) is widely distributed, and at this stage, given the sample, difficult to quantify in a meaningful way. The best-pre-



Figure 9.16: Service Building: B700 storeroom (photo M.S. Mook).

served storeroom A1200 had at least seven large pithoi (with concentrations of wine, oil, and olives) at the time of the room's destruction, though with an area of twenty square meters, it could well have accommodated many more vessels. The neighboring rooms, A1400 and A1500 were also evidently storage spaces. There is evidence for grain and pulses in A1500, probably stored in sacks or perishable containers, while A1400 was not sufficiently preserved to derive a meaningful count of pithoi. Small pithoi were also found in one of the kitchens (A1600), in a room off of the altar room in A1900N, and in the upper dining room in A2000. A conservative estimate of pithos storage capacity, based on rooms recovered (and vessels reconstructed) so far, exceeds 5,000 liters at the moment of abandonment, though we have no reason to suspect that this represents the limits of the actual storage space within the building or in all periods of use throughout the sixth century.

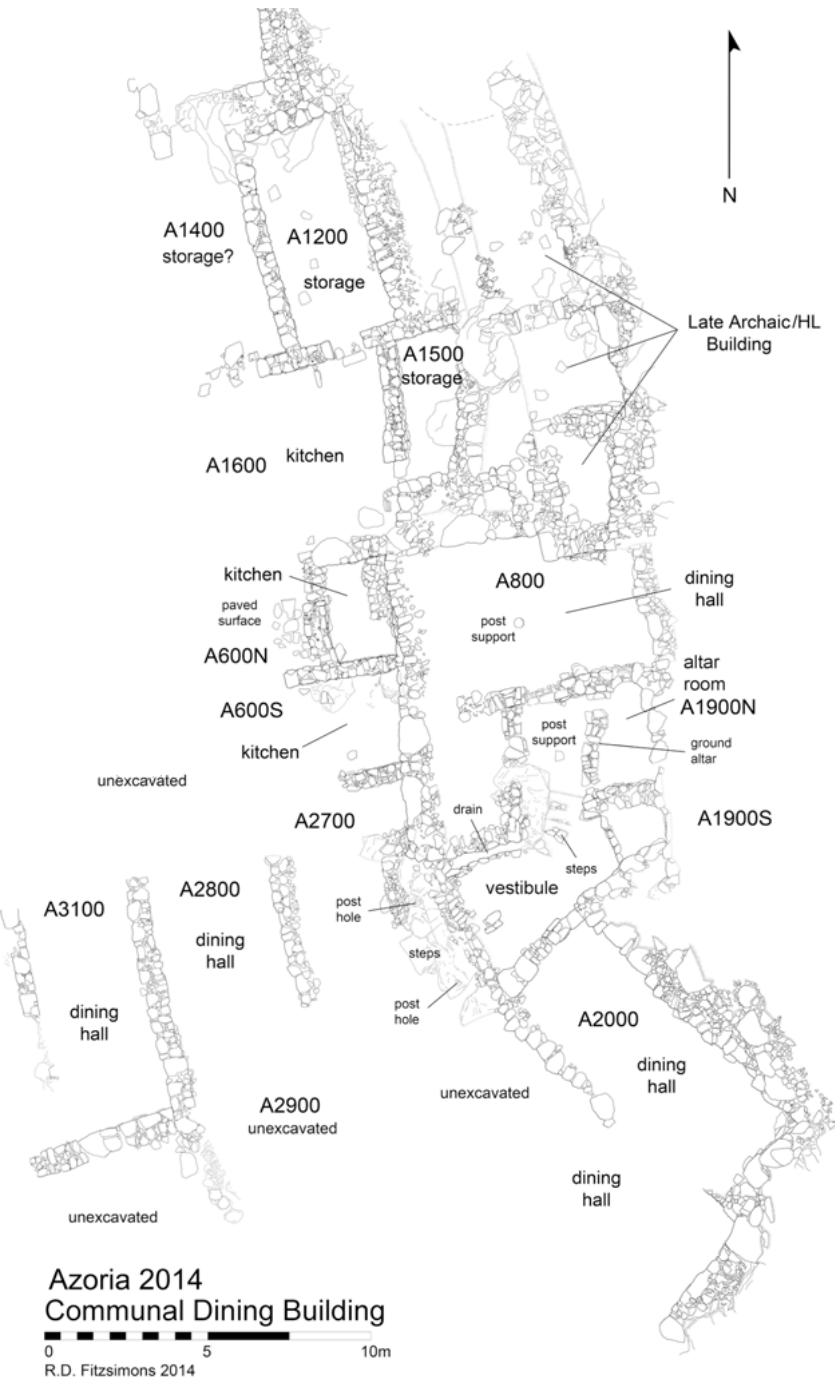


Figure 9.17: Communal Dining Building (drawing R.D. Fitzsimons).

I emphasize the potential storage capacity of these civic buildings partly because it has become an interest in recent studies exploring the question of economic centralization in Archaic Cretan urban economies (e.g., Erickson 2010, 320; 2011, 388; Watrous and Hadzi-Vallianou 2004, 342–344), in which evidence for surplus should reflect a state-organized system of taxation and redistribution through public feasts. Such approaches have followed a dominant discourse that cautiously avoids assigning historical-cultural terms, such as the *andreion*, to specific architectural forms for public commensality in Cretan contexts, preferring a multiplicity of fluid and variable contexts, reflecting the perceived complexity of formal drinking and dining practices in the Greek world. Much of this ambivalence understandably stems from our skepticism of reductive formal-functional definitions of specific building types or archaeological contexts (e.g., Sjögren 2008, 84). It should be important, however, to consider not only the total potential volume of pithoi that have survived in excavation samples (as in Erickson 2010; 2011), but also the specific kinds of foods stored, their storage longevity, and ultimately the temporal and cultural variables in systemic contexts of mobilization and consumption practices. That is, to assess the significance of the volume of storage in evidence in archaeological contexts, we would need also to consider the size of the site and potential numbers of donors and consumers; the seasonality of crops; scales of production; effectiveness of the kinds of storage equipment; and perhaps most important, the numbers of potential participants, and even the periods and nature of the events of consumption. All of these factors have potential archaeological correlates, so it is worth pursuing. At this stage of our work at Azoria, we can say the storage capacities of both civic buildings represent a significant supra-household or community investment in food mobilization for public consumption. Given the unusual volume of storage, and range of foods stored, we infer that the households may have been vehicles for mobilizing produce into the center and civic complexes.

In the Communal Dining Building, a transition between the dining rooms on the upper terrace, and the kitchens and storerooms on the lower terrace, was facilitated by means of a wide stairway, porch and vestibule in A1900S (fig. 9.17). Moreover, it is now certain that the building originally extended downslope to the west, perhaps as far as the back (east) wall of the main hall of the Monumental Civic Building (fig. 9.1). Here, in 2013 and 2014 we exposed the southern ends two more dining halls, similar in general shape and dimensions to the upper-terrace hall in A2000 (fig. 9.17: A2800 and A3100). While the floor was not preserved in the upper hall (A2800), the adjacent lower hall (A3100) had a well preserved floor, and more interesting, a deep deposit of dining debris—fragments of cups, pouring and serving vessels, krater stands, and animal bones (butchering and food debris)—evidently dumped into the room before the end of the sixth century (fig. 9.18). The range of finds mirrors the assemblages recovered in the dump in A600S, and on the floor surfaces of the dining rooms (A2000) and vestibule (A1900S). Furthermore, on the south slope (south of the South Slope Buildings) we recovered yet another hall, with a similar deposit of dumped dining debris



Figure 9.18: Dining room (A3100) with dumped debris, during excavation (photo L. Thompson).

(G300), and an adjacent food processing room in G500 (figs. 9.1, 9.19). This evidence, while preliminary, indicates the possibility that what we have called the Communal Dining Building may actually extend far to the west and south of our original core structure, encompassing the entire west and south slopes of the peak—essentially the entire area lying east of the Monumental Civic Building and the Service Building (fig. 9.1). It was also clearly more complex architecturally than we have thought, with a series of dining rooms extending down the slope in the west and south of the summit of the South Acropolis.

Much more excavation needs to be done in this area of the site, defining architectural spaces, functional assemblages, and patterns of use and communication. It is possible, however, that the three public buildings comprise a contiguously constructed and centralized core of interconnected spaces dedicated to different kinds of administered food storage, processing, and dining activities, and accommodating differently-configured groups of participants. We have commented in earlier reports, that the form of the Monumental Civic Building should have been suitable for more



Figure 9.19: South Slope Buildings: G300 dining room; G500 kitchen (photo D. Haggis).

open or communal assemblies, while the Communal Dining Building was for a number of smaller groups of participants. It was more complex, tightly organized, compartmentalized or segmented, with the replication of open halls that—like the main hall of the Monumental Civic Building—were used for public dining, but on a smaller scale. So far only two such rooms have been excavated completely (A800 and the upper room of A2000). It now appears that there were at least four others: A2000 (lower room); A2800, A3100, and possibly G300. All were probably of similar size and shape (about twenty-seven to thirty square meters in area), and each could easily have accommodated groups of about twenty people.

The Archaic Urban Landscape

The results of excavations at Azoria have demonstrated a significant phase change at the end of the seventh century, evidently transforming the EIA topography, and corresponding to a large-scale discontinuity in the cultural landscape of the region. The transition at Azoria is marked by the construction of new houses and public buildings, and a clear separation and articulation of civic and domestic spaces that

were nonetheless integrated into a coherent juxtaposition of household and communal space designed to accommodate public feasting. What is remarkable about both houses and public buildings is the unusual investment in food storage, processing, and consumption. We imagine the houses as centers of larger interdependent estates that mobilized agricultural produce and resources for processing and consumption in the city, and ultimately redistribution to dependents, and through tithes, to the storerooms, kitchens and dining rooms of the civic buildings. It is clear enough that the large houses occupy zones in close proximity, but peripheral to the civic buildings, which we can now see occupies a continuous space, from the peak across the west and south slopes of the South Acropolis (fig. 9.1). The locations of these buildings were evidently carefully chosen, negotiated, planned, and constructed as part of the late seventh-century renovation. In the civic sphere, what we have considered discrete buildings—as separate, functionally distinct and interconnected spaces—are more complexly integrated architectural ensembles suggesting different groups or configurations of participation. Our preconceptions embedded in the designation of “buildings” as groups of interconnected interior spaces, while a useful form of contextual nomenclature for excavation, affects our interpretation of spaces, and ultimately may be steering and limiting our excavation samples, while obscuring the overall design of the civic zone.

A significant aspect of urbanization was the creation of a number of focal points for mobilizing, storing, and processing food surpluses for various venues and events of domestic and public consumption. Furthermore the patterns of storage and stages of processing evident in the city’s elite houses and civic buildings imply the existence of a dispersed and multi-focal structure of larger-scale kinship-corporate groups who under the direction of the urban residences, would have centralized certain food



Figure 9.20: Bronze Corinthian podanipter base (B2200/2300) (photo C. Papanikolopoulos).

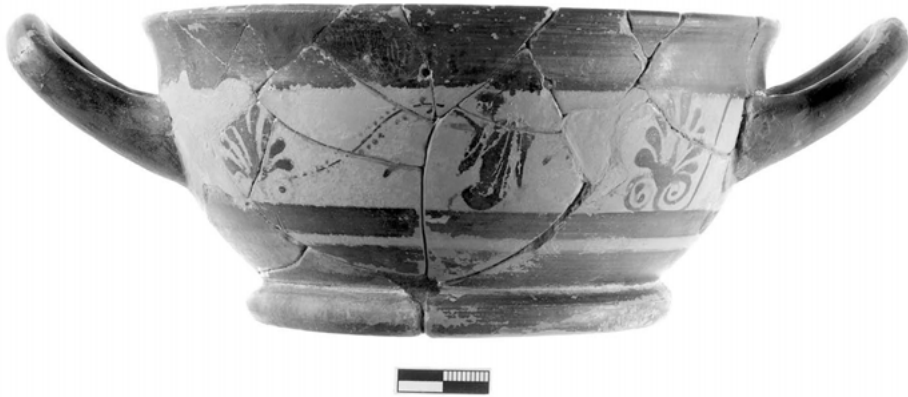


Figure 9.21: Attic black-figure cup-skyphos (B1500) (photo C. Papanikolopoulos).

resources in the city center. The form of these buildings, their physical focal point on the peak of the South Acropolis, and the contexts of storage, processing and consumption suggest the institutionalization of social practices and internal and external projections of power structures. This is not to downplay other components of the urban economy, such as the exchange, distribution, production and consumption of a variety of other goods (e.g., Perlman 2004); indeed Attic, Lakonian, Corinthian, Cycladic, Aiginetan, and other imports are widely attested in both domestic and civic contexts (figs. 9.20, 9.21) (Haggis et al. 2007, 303–305; Brisart 2014, esp. 266–267). Even containers for routine food storage and cooking, such as imported pithoi, amphorae, lekane, and chytrai, indicate complex exchange patterns within the region and the Aegean (figs. 9.8, 9.22). The point here is rather that the evidence for agricultural production is one contextual source that might allow us to begin modeling in detail social and political relationships within the urban center. Although we cannot visualize the full range of such activities, it is clear that the process of constructing the city, and these specific contexts of food preparation and consumption (and their architectural forms) were central to the formation of the social, political, and economic structure of a new urban center. The buildings themselves were not merely spaces that reintegrated or accommodated a preexisting local Iron Age social system of certain elite households, social groups, events, and ceremonies. The production of the physical forms, the spatial orientation of houses, and the process of building and rebuilding the settlement were social activities that functioned to shape and reaffirm the interrelationships among various participants and a broader urban and rural community. As a result we might resist the tendency to separate processes of urbanization and city-state formation, visualizing a form of developing sociopolitical complexity that displays material patterns, archaeological signatures and contextual correlates of urbanism.



Figure 9.22: Aiginetan chytra (E100) (photo C. Papanikolopoulos).

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Manolis I. Stefanakis, Konstantinos Kalogeropoulos,
Andreas Georgopoulos, and Chryssi Bourbou

10 Exploring the Ancient Demos of Kymissaleis on Rhodes: Multidisciplinary Experimental Research and Theoretical Issues

Abstract: The Kymissala Archaeological Research Project (KARP) is a combined research effort of the Department of Mediterranean Studies, the University of the Aegean and the 22nd Ephorate of Prehistoric and Classical Antiquities, in collaboration with the School of Rural and Surveying Engineering of the National Technical University of Athens. This paper addresses various questions of research design and the implementation of field methods in the study of a classical Greek urban environment, the demos of Kymissaleis on the island of Rhodes, an archaeological site of ca. 10 square kilometers. We discuss a range of archaeological field methods, educational initiatives, topographical applications, and data management issues as they pertain to the documentation and study of a complex archaeological landscape.

Introduction

Archaeology as a discipline is deeply connected with the idea of experimentation. Yet, experiments in archaeology, such as excavations and surveys, cannot properly be repeated by others, at least as scientific method normally dictates. This idea prompts various theoretical questions concerning archaeological field methods, especially in cases of research dealing with large-scale samples, a site-wide research universe, and broad spatial analyses of an archaeological site. In classical and urban contexts, this normally encompasses multiple fields and diverse research contexts—urban planning; fortifications and monumental architecture; civic and domestic space; and cemeteries—that may reflect social stratification and social and political institutions spanning a broad range of periods, in many cases from the Bronze Age until Late Antiquity. Engagement of the idea of “classical” material culture as an historical, cultural, or chronological term, in such a broad timeline, is a complicated matter that depends as much on an understanding of a site’s periods as on matters of scale and context. Furthermore, in handling complex urban sites, shaping an initial research design and sampling strategy to encompass various contexts is essential. It is true, of course, that preliminary study or stages of fieldwork might often lead to changes in research questions and recovery strategies, requiring one to engage diverse theoretical perspectives and levels of analysis. Since the final goal of most excavations is to understand a site’s history—and different cultural contexts through time and space—a variety of approaches to data recovery and interpretation should be carefully examined and selected before implementation. It is the aim of this paper to discuss some issues that have been raised and addressed

before and during the initial six years of the Kymissala Archaeological Research Project on Rhodes.

History of Research, and Historical and Geographical Context of Current Fieldwork

The ancient demos of Kymissaleis is located in the modern area of Kymissala (fig. 10.1), on the western coast, extending between the modern villages of Sianna and Monolithos, in the territory of Atavyros-Akramitis-Armenistis, which preserves virtually intact natural environment, protected by the European Project *Natura 2000* (code: GR 4210005, *Official Journal of the European Union* 2006, L 259, 1–104).

The identification of the region with the territory of the ancient demos of Kymisaleis has been confirmed by the existence of the ethnic epithet “Kymisaleus” on funerary stelae found in the area, as well as by the survival of the ancient name Kymissala into the recent modern period, forming compelling evidence of continuity in the region since Greek antiquity (Stefanakis and Patsiada 2009–2011, 85–86).

Demoi became the core of the administration of the pan-Rhodian state, after the founding of the city of Rhodes in 408–407. Although Ialyssia, one of the three large administrative regions of Rhodes in Greek antiquity, has been thoroughly studied (Papachristodoulou 1989; 1996; 1994, 157–168), Lindia and Kamiris have not been systematically explored. Kamiris may have consisted of nineteen demoi, twelve of which are placed on the island of Rhodes; six in the Rhodian Peraia on the opposite coast of Asia Minor, once controlled by the Rhodian State; and one on the island of Halki (Papachristodoulou 1989, 68, 72–74; 2009; 1994, 163–164; von Gaertringen 1917). Only four, however, can be placed on the map with relative certainty, with the demos of Kymissaleis, being the best documented today.

The extensive archaeological site of Kymissala attracted artists, topographers, and connoisseurs of Greek antiquity, especially from the nineteenth century onwards (Stefanakis and Patsiada 2009–2011, 67–69). In the early 1860s the British consul Alfred Biliotti and the French painter and photographer Auguste Salzmann, carried out the first excavations at the necropolis of Kymissala (Smith 1883, 136; 1885, 371; Maiuri 1916, 294; 1928, 84; Challis 2008, 146–147). After their expedition, the partially excavated necropolis was left to local looters, while the isolation and relative inaccessibility of the area led to unprecedented grave robbing (Maillis, Skandalidis and Salachouris 2002, 260. Also, Papaioannou 1991, 120–121; Sørensen and Pentz 1992, 125).

Subsequently, the known antiquities of the region attracted the attention of Italian archaeologists, and almost immediately after the Italian occupation of the Dodecanese, research was carried out by the Italian School of Archaeology at Athens in two expeditions, in 1913 and 1915 (Pernier 1914, 236–242; Maiuri 1916; Maiuri 1928). Apart

from the Italian excavations, the Greek Archaeological Service conducted limited rescue excavations and surface clearance in the region during the last decades of the twentieth century (Konstantinopoulos 1969; Zervoudaki 1970; Patsiada and Fili-monos 1987a; 1987b).

The first intensive archaeological research project in the region started in 2006, as a combined effort of the Department of Mediterranean Studies, University of the Aegean and the 22nd Ephorate of Prehistoric and Classical Antiquities, in collaboration with the School of Rural and Surveying Engineering of the National Technical University of Athens, and the participation of the Institute of Archaeology of the Nicolaus Copernicus University in Toruń, Poland. The main purpose of the project has been to determine and document the geographical extend and chronology of the ancient demos of Kymissaleis (Stefanakis 2009, 2010a, 2010b; Stefanakis and Patsiada 2009–2011).

Research Limitations

The research design for the past six years has been constrained by a number of difficulties in shaping a preliminary understanding the chronology, extent, and the spatial organization of the demos as the broadest scale of analysis (Stefanakis and Patsiada 2009–2011, 70–71). First, the mountainous and densely wooded region of Kymissala—dense vegetation, rugged terrain, and general lack of surface visibility—were significant obstacles, hindering our ability to get a sense of the ancient topography, and correlate the numerous sites comprising the demos; the extensive spread of pine forest in the region, an environmental condition of the last century, has resulted in many cases in the destruction of walls and foundations of buildings across the settlements and many of the tombs in the necropolis.

Second, the widespread looting of antiquities, which flourished in the area until the last decades of the twentieth century, is perhaps the most important obstacle in our understanding of the culture history of the area, not only because of the damage to archaeological contexts, but because we are still unaware of many of the locations of these intrusions, and the full extent of the artifacts recovered or destroyed (e.g. Furtwängler 1886).

Third, human activity from Medieval to modern periods has also caused irreversible damage to the archaeological landscape. During the period of the occupation of the island by the Knights of St. John (1309–1522 A.D.), material from the archaeological sites of Kymissala were, most likely, employed in the construction of the castles of Monolithos and Sianna, the four coastal observation towers (Stefanidou 2004; 2001a–c), as well as in the later constructions of the adjacent villages of Monolithos and Sianna. Finally, modern herding, beekeeping and agricultural activity have caused damage to various sites and monuments.

The Archaeological Topography of Kymissaleis

The archaeological topography of the demos (Stefanakis and Patsiada 2009–2011, 63–67, 86–92) may be visualized by following the ancient route, identified originally by the Italian team (Maiuri 1916, 285–288) (figs. 10.2, 10.29). The first archaeological site when entering the area of Kymissala is Alonia, named after the many threshing floors built in later years, often with ancient stones taken from nearby buildings—retaining walls that once supported the side of the ancient road are visible nearby. East of these walls there is a monumental tomb carved into the side of a huge rock, which had fallen into the ancient road. Both the tomb's entrance and the niche on its facade are surmounted by a carved pediment. In the chamber are two carved benches, one of which is decorated with images of a pillow and footstool.

The road continues to the site of Stelies, where, around an ancient spring, a small settlement was identified, preserving various constructions and foundations of monumental buildings. South of this settlement a second part of the retaining wall of the ancient road is preserved. The road then culminates at the site on the low hill of Marmarounia. On the southern slope of the hill, a localized scatter of rectangular stone blocks comprises the remains of monumental structures and walls at the location. At the northern edge of the hill, a relatively well-preserved enclosure built of polygonal masonry has also been found, with an entrance on its narrow east side. It could be a shrine, as one can infer from the large cylindrical altar in situ inside. The settlement at Marmarounia seems to be the place from where one can best gain access to the

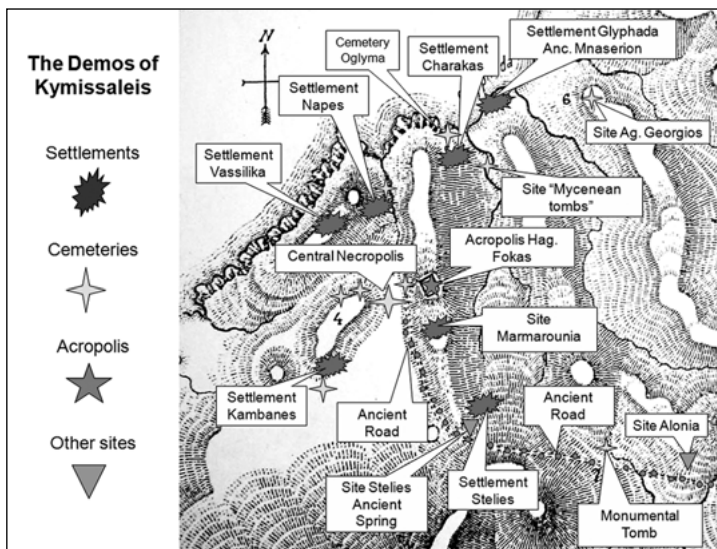


Figure 10.2: Map of the archaeological sites in the Kymissala area (drawing KARP).

acropolis of Kymissala, on top of Hagios Fokas, the highest hill in the area. On the slopes of the hill, extensive fortification walls are preserved while at the top of the acropolis there are the ruins of a temple. From the hill of Hagios Fokas the ancient route splits. One branch descends westwards and passes through the quarry of gray limestone, with which many of the ancient structures were constructed. At the west foothill of Hagios Fokas, the road enters the central necropolis of Kymissala, extending to the east and north slopes of the opposite hill of Kymissala.

Leaving the necropolis behind, the road tends to the northwest to the site of Vassilika, which features the impressive ruins of the most extensive settlement of Kymissala, with substantial remains of ancient buildings, including a shrine, domestic quarters, a tower and parts of a perimeter wall. It is one of the most important sites overlooking the small plain of Vassilikos. Further east, at the site of Napes, on the slope of a small hill, stands one more settlement, with poorly preserved buildings, foundations, rectangular altars and various architectural remains. To the northeast of this site lies a small cemetery, probably connected with that settlement. The visible pottery from this area suggests a Hellenistic and Roman date.

Returning to the acropolis, the other branch of the ancient road turns northeast descending towards the small bay of modern Glyphada, identified by Strabo (*Geographica* 14, 2.12.1) as Mnaserion, a settlement, which probably served as the harbor for the demos. Next to the sea, along the modern road, many walls and remains of ancient occupation—mainly Roman and early Christian—are visible, though partially destroyed by the modern road. At the west end of the bay are the ruins of two early Christian Basilicas.

Eastward from the settlement of Glyphada, on the slopes of a low hill, we identified a small cemetery with many looted shaft graves, most likely of Hellenistic date, while a second small cemetery is located to the south of the settlement, again severely looted. On the top of the hill of Charakas, which dominates Glyphada Bay from the west, one more extensive settlement was identified, with long walls, foundations of buildings and a number of natural or dug cisterns. On the north slope of the hill at the site Oglyma, there is yet another shaft-grave cemetery. Finally, at the site of Kampanes, on the southeast end of the plain of Kymissala, lies one more large settlement. Adjacent to it, there is a small cemetery of Hellenistic date, with remains of grave monuments scattered around the area.

Within this area of diverse, widely dispersed, and extensive archaeological remains, the sites of the acropolis and the central necropolis (fig. 10.3) were selected for initial investigation and intensive excavation.

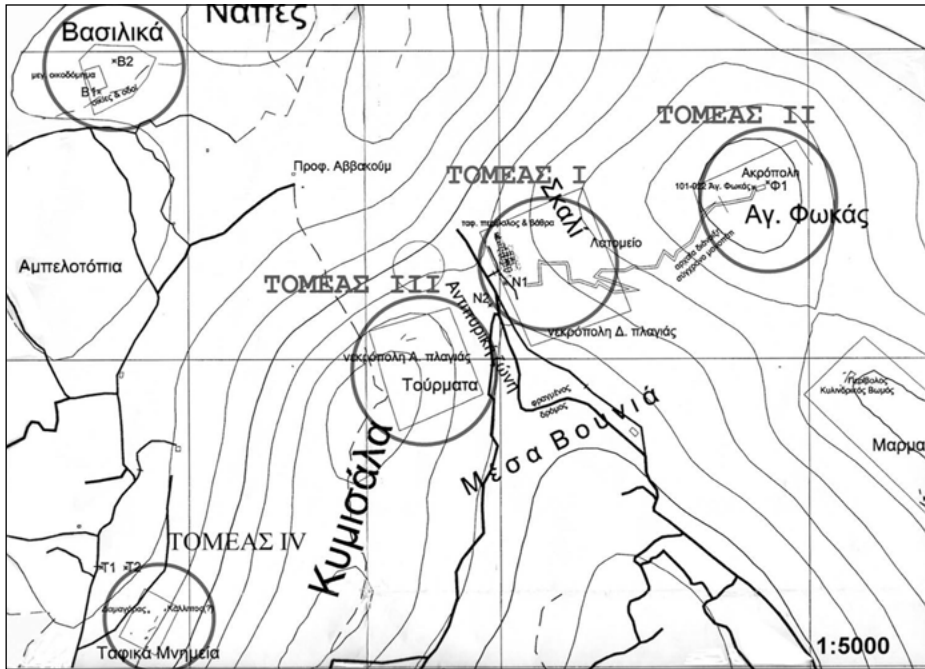


Figure 10.3: Topographical map of the main areas of excavation (drawing KARP).

The Acropolis (Hagios Fokas Hill)

On the peak of the acropolis of Hagios Fokas hill stands a temple (fig. 10.4) (Maiuri 1916, 285–298; 1928, 83–84; Sørensen and Pentz 1992, 126–128; Stefanakis and Patsiada 2009–2011, 72–74). The building's orientation is east-west, with the entrance to the west. It consists of a deep front room and a cella, with total external dimensions thirteen and a half by five and eight-tenths meters. Only the lower row of stones is preserved in situ, while slabs that originally formed the second course of the north wall have fallen into the interior. The preserved height of the wall was ca. 122–123 centimeters. The long walls of the temple terminate in both the front and back in a kind of semicircular portico at the four exterior corners of the building. Attached to the north portico on the front side, a large rectangular upright shaft is preserved in situ. Also preserved is a large threshold marking the entrance to the cella. According to the Italian archaeologists, the temple dates to the third or second century, while the deity to whom it was dedicated remains unknown.

On the west slope of the hill, west of the temple, a part of the defensive wall of the acropolis is well preserved. Especially interesting is the central part of this wall, which



Figure 10.4: The temple on the acropolis (Hagios Fokas hill) (photo KARP).

is preserved to a length of about eighteen meters, and three meters high at several points (fig. 10.5) (Berg 1862, 151; Biliotti and Cottret 1881, 86; Maiuri 1916, 289–290; Hope Simpson and Lazenby 1973, 146; Stefanakis and Patsiada 2009–2011, 74–76). The lower part of the wall is built of large polygonal blocks. The upper part is built according using irregular orthogonal masonry. The facade in the lower polygonal part is rather rough (quarry face), while the upper part is nicely dressed and decorated—the upper row is decorated with incised patterns, such as rows of diamonds, cross hatching, crooked lines and other motives. In 1853, Newton (1865, 203–4; Pernier 1914, 238) also observed traces of red paint, not visible today. The building styles and the technique of stone cutting suggest a date of this part of the fortification in the second half of the fourth century (Orlandos 1994, 214–15, 220, 248–50).

The Central Necropolis in the Kymissala Valley

The central necropolis occupies the valley between the hills of Hagios Fokas and Kymissala, extending to the north slope of the latter (Biliotti and Cottret 1881, 89; Furtwängler 1886, 131; Pernier 1914, 239–241; Maiuri 1916, 295; 1928, 84; Inglieri 1936,



Figure 10.5: Central part of the west defensive wall of the acropolis (photo KARP).

53–4; Konstantinopoulos 1969; Hope Simpson and Lazenby 1973, 146–147; Sørensen and Pentz 1992, 124–125). For practical reasons the necropolis was divided into three sectors. A number of graves were investigated in various spots of the necropolis, in order to clarify its extent as well as the chronology of use (Stefanakis and Patsiada 2009–2011, 76–86). The tombs were mainly chambers dug into the rock, and fall into three major categories:

- (1) Tombs previously investigated. These installations had been thoroughly cleared—the method and finds are not known—resulting in an empty chamber and ante-chamber, found filled in with slope wash debris. In these cases, only traces of skeletal remains have been detected, with no extant artifacts or sherds apart from the occasional small fragment.
- (2) Looted tombs. In these cases, it is clear that looters had dug a deep channel or a pit leading directly to the chamber entrance; normally the grave marker has been displaced or broken. Skeletal remains, badly damaged, were normally left within the chamber, usually scraped to the side or in front of the entrance. Small terracotta vessels are often recovered, having been moved to the sides or corners of the chamber. Very often vessels broken during recovery are also found, either in situ or evidently discarded on the exterior of the chamber.
- (3) Intact tombs. They account for only twenty percent of the graves investigated.

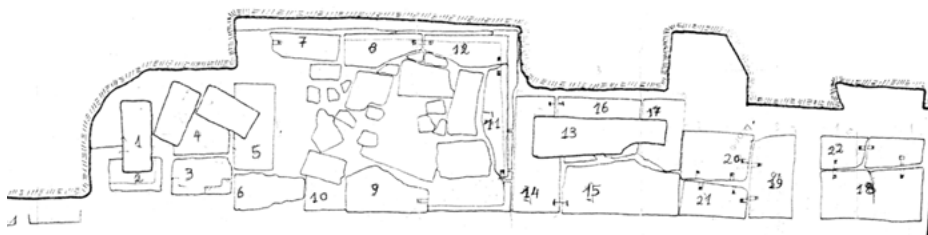


Figure 10.6: State plan (1968) of the funerary monuments (courtesy 22nd Ephorate of Prehistoric and Classical Antiquities).

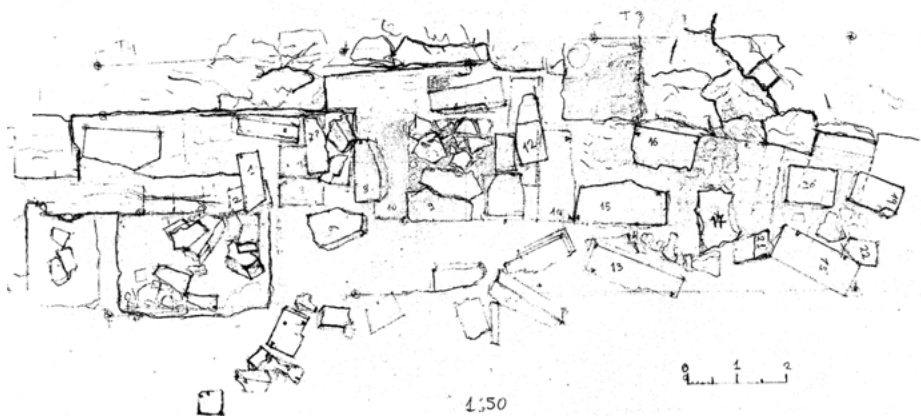


Figure 10.7: State plan (2008) of the funerary monuments present situation (drawing KARP).

Sector I covers the western foot of Hagios Fokas Hill. In 1968, the Greek Archaeological Service brought to light five contiguous grave monuments (fig. 10.6), built of large rectangular blocks, forming a total length of thirteen meters and maximum width of three meters (Konstantinopoulos 1969). Unfortunately these monuments were disturbed and dismantled some years later, in the 1970s, with the use of a bulldozer during illegal activities on the site (fig. 10.7). The southern monument was completely destroyed and the remaining four were partly damaged. In the area, eleven graves were investigated, of which two were found intact. All were chamber tombs, cut into the bedrock, and vary in dimension and shape (Stefanakis and Patsiada 2009–2011, 77–82).

Among the graves investigated in Sector I, some are outstanding, such as Grave 2/2006 (figs. 10.8, 10.38a), consisting of an antechamber with steps leading into the two chambers, one on the east wall and one on the north wall; and grave 4/2007



Figure 10.8: Grave 2/2006 (photo KARP).

(fig. 10.9), with a large—almost square—antechamber that has a 2.22 meter long stepped entrance leading down into the burial chamber. The entrance of the chamber was a natural opening in the rock, shaped by a neatly built wall, approximately half a meter wide. At the lower part of the facade there is a small square entrance sealed by a circular slab of stone. Both graves were looted, but small vases were left behind: in grave 2/2006, a black glazed kantharos, a small black glaze phiale, a black glazed askos of guttus type, and a plain dish (fig. 10.10); in grave 4/2007 a black glazed cup (fig. 10.11), a thurible, a lamp (fig. 10.12) and a lid of a cylindrical pyxis, dating to the end of the fourth century, as well as a cooking pot and two lamps of Late Antiquity (fig. 10.13) (Stefanakis and Patsiada 2009–2011, 79–80).



Figure 10.9: Grave 4/2007 (photo KARP).



Figure 10.10: Pottery from grave 2/2006, end of 4th century (photo KARP).



Figure 10.11: Black glazed cup (Π210–220) from grave 4/2007, last quarter of 4th century (photo KARP).



Figure 10.12: Lamp (Π293) from grave 4/2007, end of 4th century (photo KARP).



Figure 10.13: Lamp (Π209) from grave 4/2007, late 4th century C.E. (photo KARP).

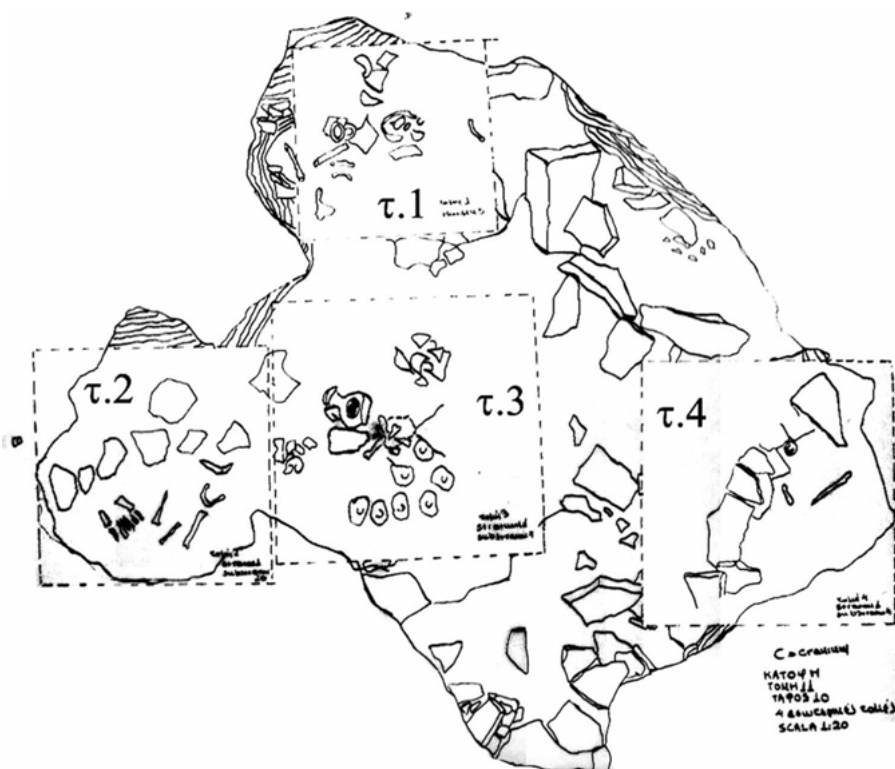


Figure 10.14: Plan of grave 10/2010 (drawing KARP).

In Sector I there is also a very large cavernous chamber tomb (10/2010), with a well-like opening in its roof. It is of irregular shape (fig. 10.14) with three distinct large niches at the north, east and southwest. The entrance, in the west wall of the chamber, was carefully built of medium-size stones. On the outside, slabs of stone indicated a kind of paved floor, while in the north quarter of the trench a few disturbed steps seem to lead from the paved court up to the top of the tomb and its opening.

The chamber contained a large number of sherds, broken vessels, and human bones (fig. 10.15). In the southwest niche, a stone wall-like construction contained an intact burial, accompanied by a black glazed phiale and a bronze coin of Agathocles king of Syracuse, ca. 290 (*SNG Copenhagen*, no. 779; Calciati 1986, no. 142), and dating the burial to the early Hellenistic period. The unstable condition of the tomb's walls however, precluded further investigation, and the tomb is now sealed.

Excavation within the chamber yielded at least twenty-five commercial amphoras (fig. 10.16), seventeen pithoid vessels (fig. 10.17), as well as dozens of smaller vases, which for the most part belong to Late Antiquity. Minor objects include part of a bone pendant, two burnished animal teeth, a discoid loom weight and a small bronze bell. As to the anthropological material, the first estimate suggests a minimum of fifty-three individuals. Apart from adults, subadults and infants were included.



Figure 10.15: Excavation stratum from grave 10/2010 (photo KARP).



Figure 10.16: Late Roman commercial amphora from grave 10/2010 (photo KARP).

It seems that the earliest use of grave 10/2010 dates to the early Hellenistic period and was reused in Late Antiquity, serving as an ossuary for many secondary interments, which, according to the pottery, date from the second to the fourth century

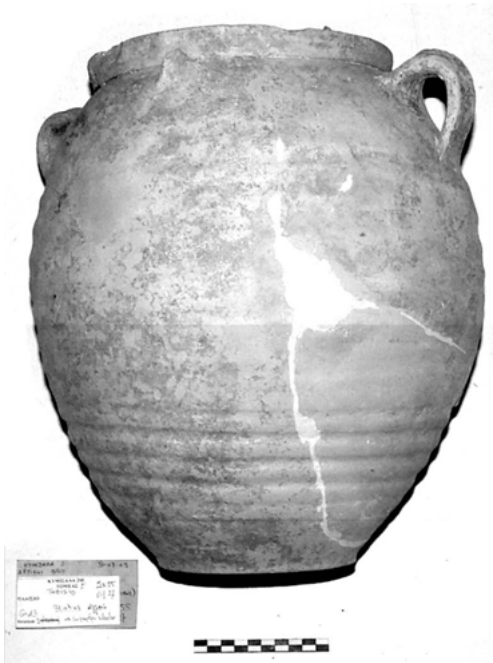


Figure 10.17: Late Roman pithoid vessel from grave 10/2010 (photo KARP).

A.D. During that period, the aperture in the roof was reopened, and bones from primary burials were deposited. In the earliest strata, there is a careful arrangement in the chamber, while the later layers suggest very little ordered placement (Stefanakakis and Patsiada 2009–2011, 81–82). The part of the necropolis at the west foothill of Hagios Fokas (Sector I) seems to date to the Late Classical and Early Hellenistic years, with some re-use during Late Antiquity.

Investigation has been also been conducted on the steeper and forested east slope of the Kymissala hill (Sector III). The western part of the necropolis is known to have been excavated by Biliotti in the 1860s, and further explored by Pernier in 1912 and Maiuri in 1915, all of whom reported Late Mycenaean and Early Greek burials and finds (Maiuri 1916, 297; Sørensen and Pentz 1992, 125). This is also the area where Maiuri came across with the infamous funerary stele of Kymissala (AMP 3516) (fig. 10.18), (Maiuri 1916, 296–297, fig. 14; 1928, 84), most likely dating to the late eighth century, an early example of Rhodian Orientalizing art (Andronikos 1963, 192–194, pl. 88a–c; 1968, 120), but which may also suggest a relationship to earlier Mycenaean monuments (Mpakalakakis 1974, 250–251; Sourvinou-Inwood 1996, 221–222, n. 455).

Twenty-one graves were investigated in Sector III, a majority of them cist graves and chamber tombs dug into the soft bedrock. Four of the chamber tombs proved to be intact (Stefanakakis and Patsiada 2009–2011, 82–85). A few looted tombs yielded earlier finds such as part of an Archaic pithos with relief decoration of the seventh century, from tomb 2/2007 (fig. 10.19); parts of two Ionian cups of the seventh–sixth

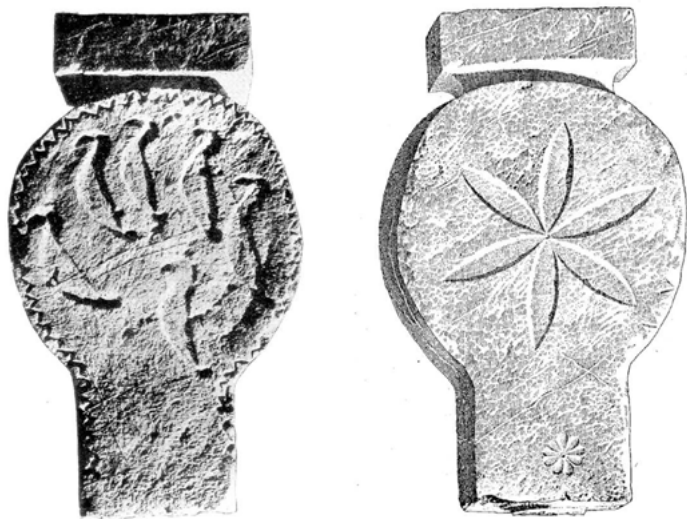


Figure 10.18: The funerary stele of Kymissala (AMP 3516) (photo after Maiuri 1916, Fig. 14).



Figure 10.19: Part of Archaic pithos with relief decoration (Π45) from grave 2/2007, 7th century (photo KARP).



Figure 10.20: Part of Ionian cup from grave 4/2007, 7th–6th centuries (photo KARP).

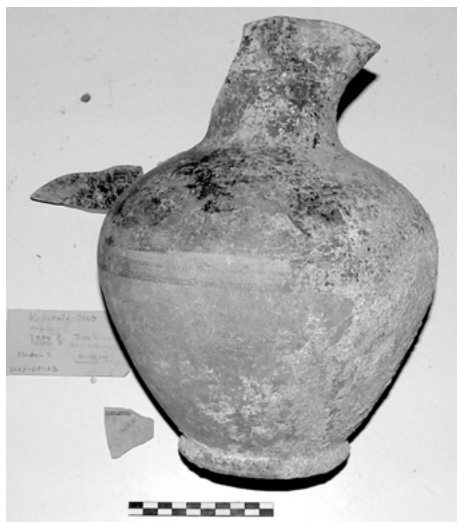


Figure 10.21: Trefoil oinochoe from grave 5/2009, 6th century (photo KARP).

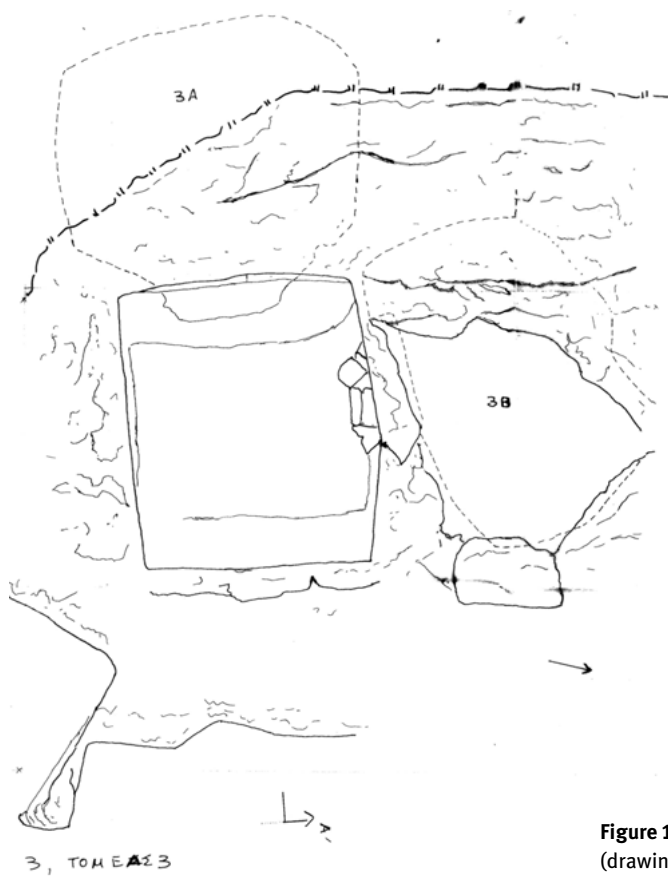


Figure 10.22: Plan of grave 3/2007 (drawing KARP).

centuries (fig. 10.20) from tomb 4/2007; and a decorated trefoil oinochoe of the sixth century from tomb 5/2009 (fig. 10.21) (Stefanakis and Patsiada 2009–2011, 83).

One of the most interesting finds of Sector III was tomb 3/2007. It consisted of an almost rectangular antechamber (fig. 10.22), which led to two burial chambers, one on the west and one on the north side. The west chamber had been looted. In the disturbed stratigraphy of the antechamber, however, a black glazed olpe and sherds of a black glazed dish with impressed floral decoration on the bottom were collected. The second chamber, chamber B, was found intact. The entrance, on the north wall of the antechamber, was sealed with a stele and smaller rocks, and the roof had collapsed. Chamber B contained two individuals (fig. 10.23), placed next to one another with the heads oriented to the east. As grave offerings, two trade amphoras were placed in the chamber, along with two black glazed skyphoi of Bol-Sal type (fig. 10.24), and a black figure lekythos (fig. 10.25), decorated with a floral ornament, all dating to the first half of the fourth century (Stefanakis and Patsiada 2009–2011, 84).

Grave 19/2010 was also found intact, containing a single burial, accompanied by a transport amphora, a black glazed kotyle (fig. 10.26), a pyxis and a lamp, as well as two miniature amphoras (fig. 10.27), all dating to the first half of the fourth century (Stefanakis and Patsiada 2009–2011, 84–85).



Figure 10.23: Grave 3/2007, Chamber B, burials (photo KARP).



Figure 10.24: Black glazed skyphos of Bol-Sal type (Π104) from grave 3/2007, second quarter of 4th century (photo KARP).

The west part of the necropolis (Sector III) seems to date from the seventh to the fourth centuries, while earlier research (Konstantinopoulos 1969, 481) has shown that it may have been partially re-used during Late Antiquity.

In the north sector (IV) of the central necropolis (fig. 10.3), where only cleaning work has been conducted to date, there are visible various built grave monuments. Five such monuments—most constructed with isodomic masonry—have been cleared to date, (fig. 10.28). Among them, inscriptions engraved on stone blocks were recovered, such as the huge rectangular base with the inscription, ΚΑΛΙΠΠΙΟΥ; and a



Figure 10.25: Black figure lekythos (Π103) from grave 3/2007, first half of 4th century (photo KARP).

smaller block with the inscription, ΔΑΜΑΓΟΡΑ ΑΡΙΣΤΟΔΑΜΟΥ ΚΥΜ(ΙΣΑΛΕΩΣ)/ ΚΑΙ ΤΑΣ ΓΥΝΑΙΚΟΣ/ ΧΡΥΣΟΥΣ ΝΙΚΑΣΑΓΟΡΑ ΚΡΥΑΣΣΙΔ(ΟΣ) (Pernier 1914, 241; Tod 1921, 62, n. 129). These monuments seem to belong to a wealthier section of the necropolis, along the main route that leads from the acropolis to the important settlement of Vassilika (Maiuri 1916, 286, 295; Stefanakis and Patsiada 2009–2011, 85–86).

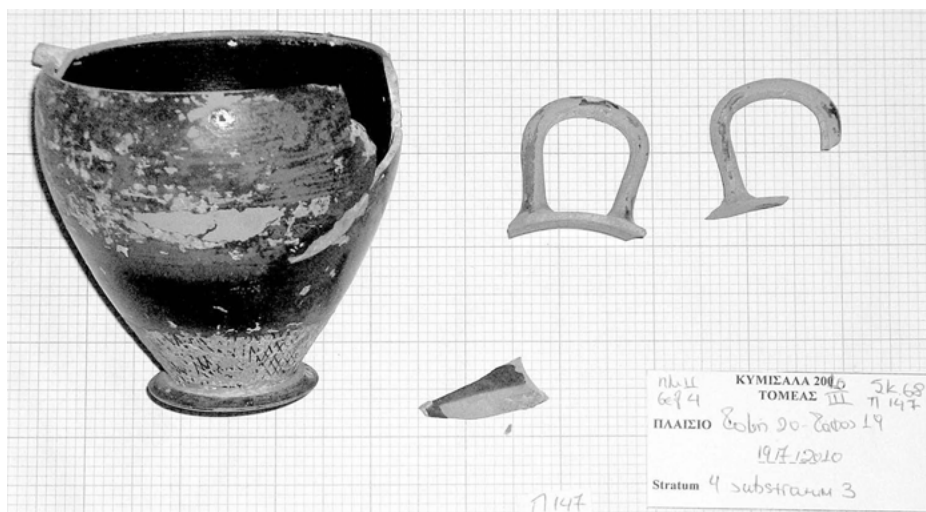


Figure 10.26: Black glazed kotyle (Π147) from grave 19/2010, second quarter of 4th century (photo KARP).



Figure 10.27: Burial of grave 19/2010 with two amphoriskoi (Π154, Π150), first quarter of 4th century (photo KARP).



Figure 10.28: Sector III, grave monument (photo KARP).

Preliminary Results

Despite the limitations, the extent of the demos has been determined by systematic surface survey and has yielded thus far, more than a dozen archaeological sites from Archaic until Late Antiquity scattered in the dense woodland covering an area of approximately 10 square kilometers (figs. 10.2, 10.29).

Our work to date has shown that Kymissala constitutes one of the most extensive archaeological sites and important networks of classical settlement known in the countryside of Rhodes. It had its own citadel on the hill of Saint Fokas, which dominated the region and no less than seven settlements that must have belonged to its jurisdiction—namely the sites of Vassilika, Napes, Charakas, Glyphada/Monosyria, Stelies, Maramarounia and Kambanes. Furthermore, several cemeteries are associated with the settlements, at Napes, Charakas and Glyphada, while minor groups of graves have been also located at the sites of Alonia and Kambanes, with the most important and prominent—probably the main urban cemetery—the central necropolis on the foothills of Kymissala and Hagios Fokas.



Figure 10.29: Aerial photograph of the Kymissala region: α) Hagios Fokas/Acropolis; β) Charakas hill; γ) Marmarounia hill; δ) Alonia; ε) Kymissala hill; ζ) Kymissala plain; η) Vassilikos plain; θ) Vassilika settlement; ι) Atoumas hill; κ) Glyphada; λ) Stelies settlement; μ) Kampanes settlement; ν) Nappes settlement; ξ) Aptetones settlement; ο) Oglyma cemetery (photo KARP).

It seems clear that the demos of Kymisaleis was a thriving settlement at least from the seventh century until Late Antiquity, as is verified by the excavation in the central necropolis, as well as by the sporadic archaeological finds that have come to light over the past century. Evidence of earlier periods reported by previous investigators has not yet been recovered in the present project (Stefanakis and Patsiada 2009–2011, 92–94).

Methodology and Field Practices

Archaeological research is a result of a combination of different categories of field practices and intellectual production (Gardin 1980, 13–18). These processes are linked to form a chain extending from basic data acquisition and resulting normally in final publication, the presentation of data and a narrative constructed through interpre-

tive and theoretical frameworks. The fundamental link in this chain is inevitably the process of the acquisition of ever-expanding datasets. Our data collection is never complete, random, or objective, but is always determined by theoretical perspectives that are shaped by prior experiences and of course biases which cannot but affect our field methods, sampling decisions, scientific applications. The acquisition of new data and the development of fluid or changing narratives are inevitable but useful processes that are affected ultimately by theoretical frameworks and our changing knowledge and perception of data (Sullivan 1978, 189).

The first question that arose at the very beginning of the KARP was how to begin to define and approach Kymissala as a research universe. Actually as all archaeologists do, the Kymissala excavators deal with measurable characteristics of objects, features, and contexts, and structure their observation of empirical evidence systematically. On the other hand, any kind of interpretation involves personal perception, which is dependent on the cultural, social, political, experiential, intellectual, and psychological backgrounds of investigators. While interpretive frameworks help us to establish systems with which to analyze archaeological material and reconstruct the past, our efforts toward systematic documentation may inadvertently run counter to those theoretical constructs, even if this results in the reshaping of theoretical foundations or technological developments. That said, we took for granted that in order to advance our understanding of the site we needed to standardize language and recording methods in the documentation process.

The three basic processes in the chain of archaeological work in KARP are (1) the acquisition of elements—that is, the recovery of material; (2) the analysis—a multi-layered and -staged process from the archaeological discovery to publication; and (3) strategies of observation and reasoning. These basic procedures and processes are subdivided, depending on the progress of excavation. The strategies of observation are related to how we conceive and perceive different phenomena at different stages of work; that is, how we select the phenomena or data in order to observe them. Observation and reasoning complement and supplement each other (Embree 1990, 30), creating the foundation of a series of practices, from initial recording to final publication. Employing also the principal of collective observation—research led us to the history of scientific observation and Edmund Halley’s map compilation of 1686—we considered the implications of a multiple observers (Daston and Lunbeck, eds. 2011, 91). While Halley’s role in establishing learned observation is generally accepted, we also considered that he did not constrain himself to a given hierarchy of informants—Halley himself was an active and “seafaring observer” and his informants were volunteers. Similarly, archaeologists require local informants, “volunteers” acting not only as informants but as promoters of the archaeological project to local communities, and national and international travelers. In general this idea has been followed for most of the twentieth century, as a way for researchers to gain an understanding of unrecorded sites, findspots, and monuments on a regional scale. In our case we developed this idea further with the establishment of the “Association of the Friends

of Kymissala,” a community of locals, scholars, students and interested individuals providing information about and support for the fieldwork.

A large part of our work before engaging in actual excavation was steered toward establishing systematic recording and documentation procedures, considering that accuracy in the recording of primary observation provides grounding for any kind of hermeneutic approach. That said, a multiplicity of observations of the same conditions and processes have been proposed as a factor of objectivity, thus engaging different observers in the process of recording. Every field supervisor working in a trench in Kymissala was thus required to observe work in other trenches, while engaging in open discussion of the process of excavation, context, or material. Our overall methodology thus tends toward positivism, though our purpose is not to engage the question of the role of archaeological practice as humanistic or scientific pursuit (Cohen and Maldonado 2007, 9).

Quantitative and Qualitative Approaches

In the social sciences the powerful effects of positivism have been largely rejected. Even supporters of this school of thought accept the inherent biases and prejudices of an observer (Gartell and Gartell 1996). Positivism generally is identified with quantitative research, and therefore inherently assumes theoretical or philosophical strands of a discourse often credited to P. Lazarsfeld (Wacquant 1992), a pioneer of large-scale opinion surveys and statistical methods of interpretation. This approach is linked to the middle theory of R. Merton, and the production of abstract concepts that are formed from partial hypotheses and empirical norms, rather than the abstract concept of a social totality (Boudon 1991).

A quantitative research method is based more on the collection and analysis of numerical and statistical data rather than on subjective observation, reports and small targeted samples. Especially in the context of social sciences, quantitative research is the systematic empirical investigation of quantitative properties of phenomena and their interrelationships. Quantitative attributes are innate in every measurable object, and the purpose of quantitative research is the development and use of mathematical models, theories and/or hypotheses pertaining to a given phenomenon. The process of measurement is the core of the quantitative survey and provides the fundamental relationship between empirical observation and mathematical expression of quantitative relations. Quantitative definition in the physical sciences is widely used in social sciences such as psychology, sociology, political science, anthropology and archaeology, although in a different contexts. Qualitative methods in turn produce information through the study of specific cases and creating relevant assumptions (cf. Hunter and Leahey 2008). Keeping this basic rationale in mind we concluded that definable quantitative and qualitative methods were needed in establishing a research design at KARP.

Horizontal and Vertical Sampling

A fundamental purpose of inductive statistics is the acquisition of reliable conclusions derived from various characteristics of statistical populations, based on information recovered by sampling. We considered the implications of random and grab samples in order to recover theoretically unbiased and thus representative datasets (Boxill, Chambers, and Wint 1997, 36). At Kymissala, we established a new topographical map and grid (see discussion below on technical issues) before excavation. In this grid, the variables (tombs, installations, artifacts, buildings, ecofacts, etc.) are given spatial and non-spatial attributes. This resulted in dividing the research universe into equidimensional units, and randomly selecting from among them. Samples of populations are used to gain a general impression of the area of interest, or in order to begin to define certain characteristics.

Even though the determination of a representative sample should require knowing the absolute or likely frequencies $N_i (i=1,2,3...r)$ of the original population, our preliminary information on the distribution of those populations is not precise, so the application of sampling methods has no particular meaning. The solution to the problem of acquiring representative or unbiased samples was determined strictly with the repetitive implementation of a large number of experiments of chance. Using inductive statistics, conclusions are exported on the attributes of initial population and mainly by means of the distributional variables in horizontal samples. In terms of vertical sampling, or vertically stratified sampling based on archaeological strata, simple random selection was performed in each stratum recovered, in order to permit standardized and quantifiable results. Vertical sampling led to inferences on social hierarchies and culture patterning in general, especially in the case of the extensive necropolis of Kymissala and its bioarchaeological dataset.

Structuring the Data

Archaeological research requires activities in which the processing of archaeological evidence is structured into coherent groups, classifications, categories, or typologies. Structures like this are usually applied to artifacts, but they can be used in the analysis of context, or any part thereof. The methods that we used to create such structures constitute an important part of fieldwork in KARP, and established the groundwork for various forms of analysis. Groups, categories, or types of phenomena shape the body of material culture and the structure of analyses. What follows is the comparison, the search of particular cross-correlations or contradictions between various types or variables, uncommon regroupings in space and time or other models. The models in turn lead to conclusions, hypotheses on changes of human behavior, on resemblances and differences between groups of persons to the past, on the factors that influence the human behaviors, on the way with which they possibly contribute in the modern life.

Coombs (1964, 5) describes analysis as the detection of relationships of patterns in any given dataset. For example, one might detect a relationship between burial practices, stone carving techniques, resource availability and rates of manufacturing. The recovery of evidence for burial practices thus produces products (information, results, data), and archaeologists then categorize the products of their work in the field as either “compilation” or “interpretation.” Compilation is a simple collection and presentation of data. The interpretation *per se* requires data processing so that conclusions may be reached on technology, symbolic action or representation, social organization and other aspects of cultural production.

Compilation as Symbolic Presentation

Compilations are undeniably the most visible result of archaeological fieldwork. Gardin determines compilation as a set of interrelated propositions that describe the material remains, with which any study of ancient populations is facilitated (Gardin 1980, 28). Such types of compilations are often symbolic constructions using a particular meta-language in order to represent their content. All drawings, maps, digitized illustration, even the code of a web-based application like “Digit” (see below, appendix 3), invariably and necessarily represent simplifications of reality, and in a sense, a symbolic depiction or representation. In order to derive meaning from compilations of information, archaeological science follows its own descriptive language of archaeological evidence, a language with rules of systematic description and measurements. One of the advantages of this language is that it allows the use of computers and relational databases for the management of vast quantities of information. Yet the drawings and the maps that accompany an archaeological publication are merely depictions or reflections of artifacts or archaeological installations. They are coded depictions that transmit a specific type of information and omit in most cases the “noise,” or any other information that impedes the transmission of meaning that the excavator imposes on the dataset.

It is a fact that archaeological evidence, being in essence incomplete or fragmentary, does not embed or ascribe obvious meanings to itself. In order to create meaning out of the data chaos and thus produce reasonably intelligible information, it is sometimes necessary to decide which types of data, measurements, and analyses to use. In KARP we attempted to form combinations of absolute measurements and criteria to encompass and facilitate variable scales of analysis. Since the objective of archaeology today is actually the comprehension of general patterns, and the generation of macroscale narratives, through data processing it is possible to conceive of repeated models in vast quantities of information in order to use them as effective, economical and manageable tools of analysis in our effort to interpret the patterns of information.

Interpretation as Reconstruction of the Past

Archaeological interpretation aims at the reconstruction of the past, including evaluation of change and stability; evolution and adaptation; resemblances and differences between population groups, and generally all elements that shape an archaeological culture or population. Most important in our case is that meaningful constructions are used in the process of interpretation—that is beyond simple compilations of information—that exceed the limits of descriptive attributes intrinsic to artifacts, buildings, constructions, and ecofacts. For example, while it is possible for an archaeologist working in laboratories to define the inclusions or chemical composition of clay that has been used in manufacturing an artifact, the process in and of itself actually does not offer an interpretation or reconstruction of the systemic context of production, distribution, or consumption of that artifact. If this method of evaluation or measurement is to be used in combination with other information on the source of raw material, it may, however, provide a means to map patterns of communication and interaction—even a specific commercial road with a sequence of places and environments whose geomorphology has the same chemical composition of the clay. Accordingly, we can produce explanatory compilations of meaning—meaningful constructions—in which the final proposal contains information that is not innate to the initial proposal (Salmon 1982, 33). Interpretation and comprehension is an objective of analysis, and the approach requires statistical methods that provide a picture of relationships between the intrinsic information provided by the artifact and all other available information related to context on multiple material and spatial scales.

The procedure of structuring and collecting data within analytical and interpretative frameworks is part of our attempt to identify and explain the multiscale patterns implicated in a single object (Lock and Molynaux 2006, 5); a skeleton within a grave, a grave within a tomb, the tomb within a cemetery, a cemetery within a settlement, and settlements within the landscape of the ancient demos represent a chain of relationships between individuals and regional religious and ritual practices from the Archaic period to Late Antiquity. The requirements of interpretation, however, are not limited to context, but extend to a social and political unit related to ideologies and other social configurations, and the strict mathematic approach of a logarithm is thus not capable of giving answers to problems of social interpretation. It can only maintain given categorizations defined by archaeological method and theory.

In most sciences, research strategies include or are grounded in the process of experimentation. Assessing the duration of an experiment, certain factors may be seen to be maintained or stable, while others are altered, so that the effects of changes can be studied. In archaeological analysis, however, it is not entirely possible to make use of experimentation in the true scientific sense of the word, because while methods can be repeated, the context itself is unique; it cannot be reproduced; and it is normally destroyed during recovery—ultimately the method does not permit the experiment to be replicated with the identical taphonomic or systemic variables and

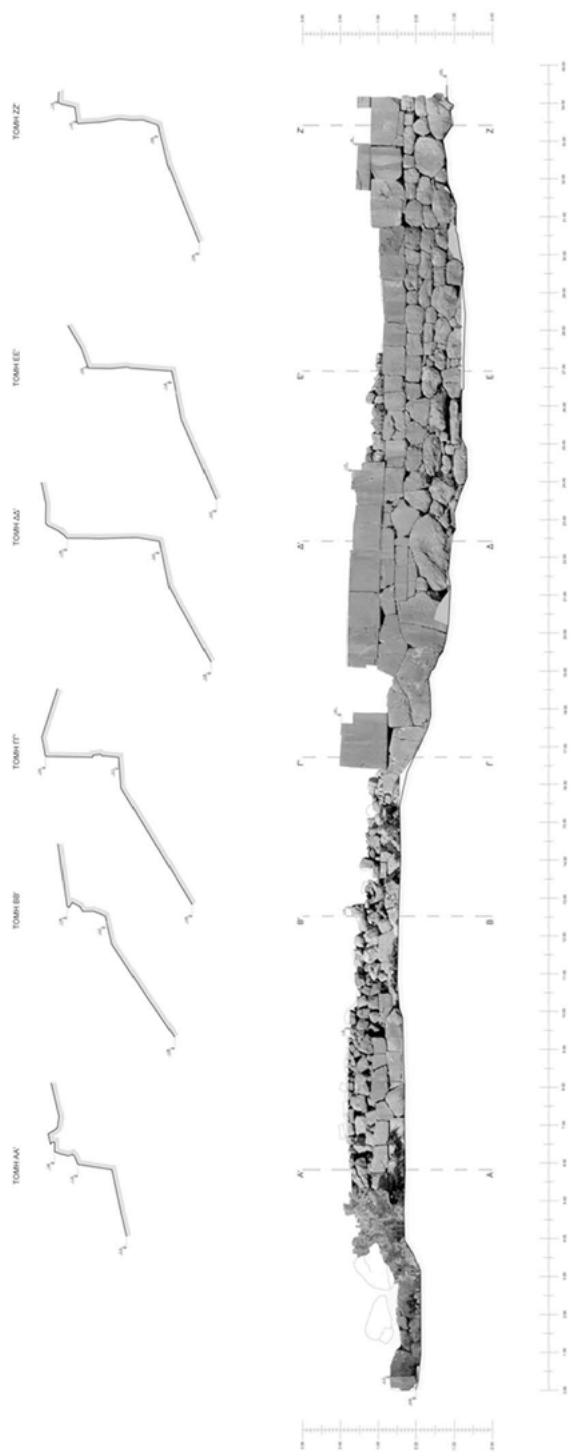


Figure 10.30: Orthophoto of the west defensive wall of acropolis (photo KARP-NTUA).



Figure 10.31: A stable grid on the inclining ground of the Kymissala Hill (photo KARP).

parameters (Nami 2010). Moreover, it is difficult for archaeologists to detect temporal phenomena without integrating patterns—relationships between multiple variables and scales of context—ultimately derived from well-dated groups of finds. Consequently archaeological analysis depends entirely on accurate dating and recording. The construction of an application capable of recording precisely the multiplicity of variables of the excavation process, and its products is essential.

Technical Issues

All ancient features, installations, and sites in the region of Kymissala have been mapped as a result of the formal collaboration between the Department of Mediterranean Study and the School of Surveying Engineering and the National Technical University of Athens. The project involved the generation of topographical and digital maps with photographic backgrounds (fig. 10.29); a orthophotomap of the wider region, at a scale of 1:2000 (fig. 10.37); and photogrammetric documentation of monumental graves (figs. 10.38a–b) from the central necropolis and the western defensive wall of the citadel of Hagios Fokas (fig. 10.30). We have also made progress on a plan of the urban structure of the settlement of Vassilika (see appendix 2).



Figure 10.32a: Vertical photography with the use of the large tripod in Sector I (photo KARP).

Vertical photographic recording, in the excavation context, has led to the construction of stable grids interrelated to the topographical map. Inspired by underwater archaeology where visibility problems make stable grids necessary (Catsambis, Ford and Hamilton, eds. 2011, 128), these armatures are constructed with four by four meter metal tubes—aluminum or plastic tubes are suitable if the prerequisite stability is ensured—supported by vertical axes, so that relative precision (Banning 2002, 11) on the horizontal gradient is ensured. The whole construction facilitates vertical measurements on steep and variable terrain (fig. 10.31)—the excavation in the central necropolis of Kymissala is conducted on steep inclines, exceeding forty-degree slopes.

Inspired by Poulter and Kerslake (1997), vertical photography became a technical issue of some importance in the KARP, conducted either with stable-trench armatures or large tripods. Vertical photographic recording ensures speed in recording and accurate scaling through computer applications (such as AutoCAD). During the



Figure 10.32b: Vertical photography with the use of the large tripod in Sector I (photo KARP).

excavation of a specific trench, every stratum is recorded with vertical photographs. A number of control points are used—normally painted red or yellow—and photographs are digitally manipulated in order to remove any distortion. The process of rectification results in a corrected plan construed through software following standards of good practice.

Dealing with tombs and burial chambers with irregular shapes and topography is a time-consuming process, and part of this work is carried out using photogrammetric procedures (see below, appendix 2 and figs. 10.38a–b). A major advantage of using photogrammetry to record sites is the time saved in the field (Fussell 1982), while digital photography surveys form a database that can be used for measurement at a later date. Large tripods have been used in cases of large-scale monuments. Photographs are rectified and scaled with the same process as mentioned above, and as each successive photo is placed on the mosaic a map of the monument emerges; the



Figure 10.33: Students of the University of the Aegean during excavation (photo KARP).

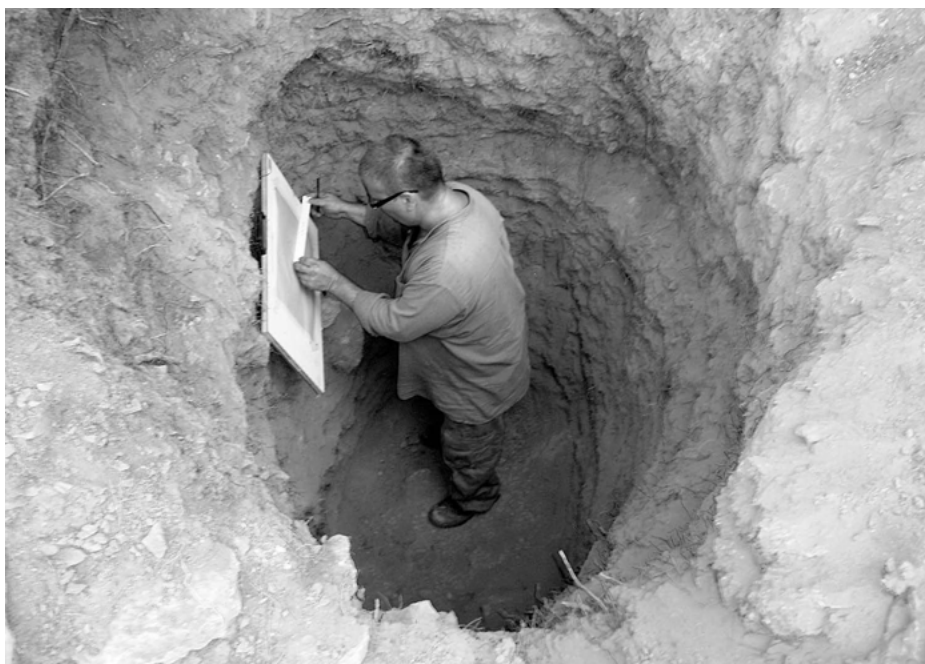


Figure 10.34: Students of the University of the Aegean during trench drawing (photo KARP).



Figure 10.35: Students of the University of the Aegean cleaning skeletal remains (photo KARP).



Figure 10.36: Skeletal remains in grave 11/2009 (photo KARP).



Figure 10.37: The orthophotomosaic of the Kymissala area (photo KARP-NTUA).

method was successfully applied on the series of the five contiguous grave monuments in the eastern part of the necropolis (figs. 10.32a–b).

Educational Issues

Education is an on-going issue that has been explored theoretically and practically through the seven consecutive years of excavation. The project trains undergraduate and graduate students in archaeology from Greek and Polish Universities, as well as students of topography from the National Technical University of Athens, under the guidance of faculty and members of the local Greek Archaeological Service. The integration of educational programs in archaeological field research is of course a complicated matter—the formation of long-term and sustainable programs is dependent on the intellectual direction of the field project, as well as the vagaries of practical, legal, and financial limitations of fieldwork. Other questions we have considered include how and when students should participate in the processes of interpretation, decision making, publication and synthesis. In KARP, students undertake the role of

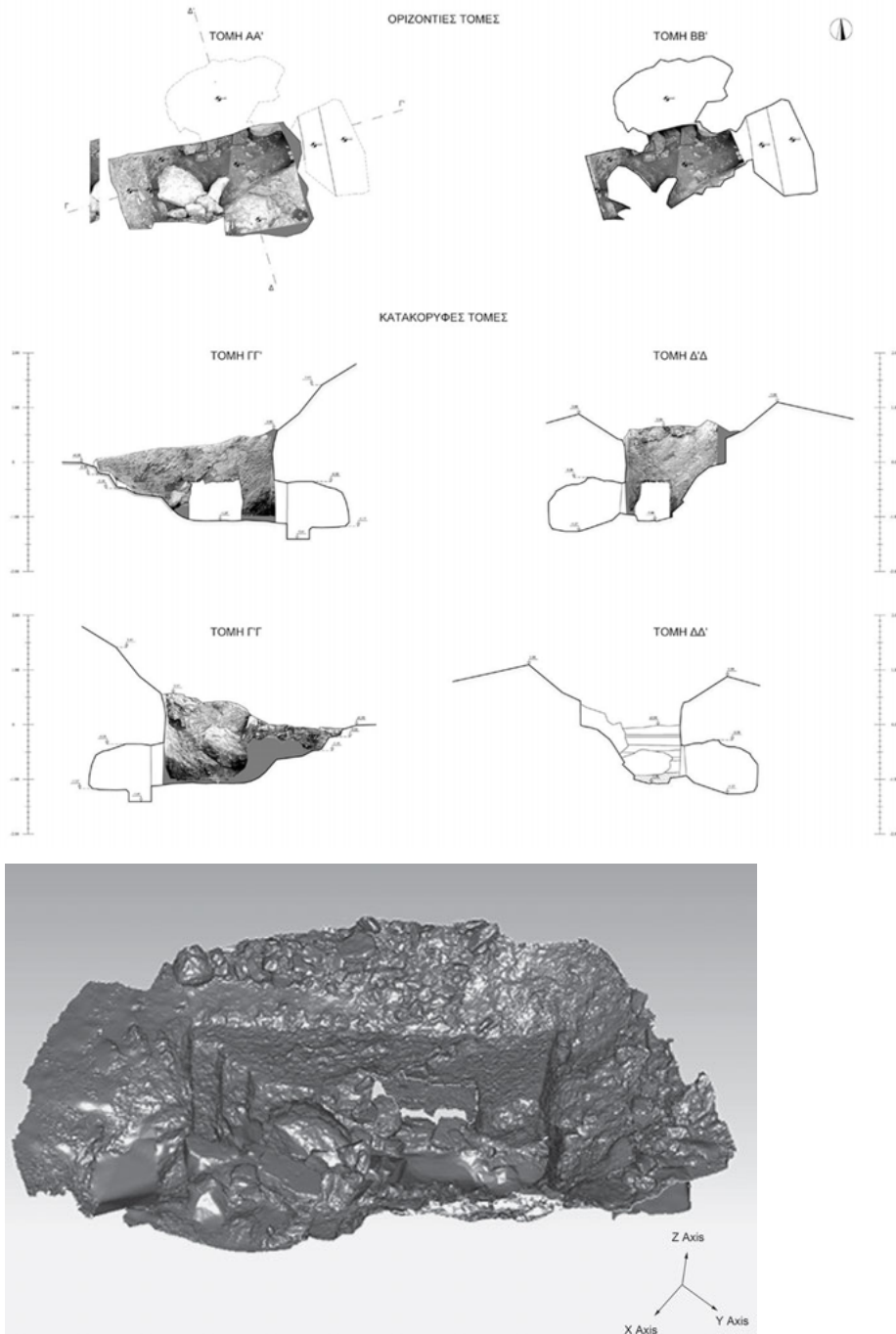


Figure 10.38a–b: The geometric documentation of grave 2/2006 on the Eastern Necropolis of Kymissala-Orthophotos (a) and 3D model (b) (KARP-NTUA).

archaeologists, always with guidance, in order that they acquire a range of experiences that might allow them to engage and understand the diverse range of procedures, methods, applications, and interpretive strategies involved in primary fieldwork. The purpose is that they learn field methods, but also visualize the importance and the formal process of an excavation at all stages.

Students gain practical experience defining trenches, recognizing stratigraphy, recovering artifacts and human remains (figs. 10.33, 10.35), drawing excavation plans (fig. 10.34), keeping excavation notebooks; they also conduct all routine photography of trenches and artefacts; conservation of pottery; classification of finds; and the primary recording and the digitalization of data. More advanced students are given the opportunity to write reports on the work completed and take on more specialized tasks, such as the conservation of human remains. Finally, manual labor is of course an essential part of the educational process, because one should become sensitive to the physical qualities of all components of archaeological context, including matrices, formation processes, and taphonomic processes, which can only be understood by hands-on participation, which on classical sites in Greece, is experience normally afforded to workmen.

The KARP excavation is directly connected with to “Undergraduate Student Practice” project of the Greek Ministry of Culture and Sports (organized by the University of the Aegean), thus providing an officially certified field practicum. The project is also linked to the European Union Erasmus Program (“Erasmus on Student Mobility for Placements”), enabling Polish graduate students of the Institute of Archaeology, Nicolaus Koperinicus University at Toruń, to conduct periodic internships in Kymissala.

On the graduate level, there are two Ph.D. dissertations, currently in progress in the University of the Aegean, related to KARP. One concerns the development and facilitation of finds classification, and the analysis of the material using digital applications; and the other deals with the constitution and the management of archaeological parks in Greece, with Kymissala being a test-case study. Also relevant are three MA theses focusing on the wider region of Kymissala as a context for analyzing sustainable growth, and cultural and environmental education, and public engagement and programming.

Further Comments

The methodology of KARP depends heavily on a series of interrelated variables, immediately relevant to the development of field practices, scientific applications and theoretical trends other sciences. It is clear that formal archaeological theory, whether articulated or not, shapes the foundation of recovery strategies in any aspect of the excavation process. In our own work, we have become conscious that theoretical trends often exist within a vacuum, depending on finite or uncritically self-defined

datasets, with little engagement with innovations in methods, practice, and applications especially of the last decade. At the most fundamental level, it should be said that many of the core questions that guide archaeological research in Greece have changed little since the establishment of the discipline of archaeology, while innovations in theory remain problematic for practitioners, and slow to evolve in application and revision of dominant narratives in archaeology (Trigger 1989, 4–7).

Manolis I. Stefanakis and Konstantinos Kalogeropoulos

Appendix 1: The Analysis of the Human Skeletal Remains from Kymissala

The study of human skeletal remains from Kymissala provides insights into the life ways, demography, paleopathology, and diet of the population groups (Larsen, 1997; Buikstra and Beck, eds. 2006). Bones and teeth serve as the primary source of evidence for anthropological and paleopathological analysis, thus their careful excavation and post-excavation treatment secures the optimal recovery and further examination at the laboratory.

The Excavation of the Burials and Curation of Skeletal Material

The existence of burials and the potential presence of human remains was known in advance of excavation, so a bioarchaeologist was involved in KARP from the outset. One of the primary aims was to apply a standard protocol for the excavation and optimal recovery of the human remains. The majority of the students participating in the fieldwork have attended the relevant courses on funerary archaeology and bioarchaeology offered by the author within the Department of Mediterranean Studies (University of the Aegean). In these courses the students became familiar with human osteology (White and Folkens 2005) and were trained in the excavation and post-excavation treatment of inhumed and cremated human remains (McKinley and Roberts 1993; Brickley and McKinley 2004; Roberts, 2009).

Bones are fragile and may fragment easily, and they can be found in unexpected positions depending on the way in which the body was buried, and if any later disturbance has occurred. During excavation care was taken to disturb bones as little as possible, using specific tools, such as dental probes, forged spatulas, precision tweezers, and brushes (fig. 10.35). Special attention was given to the recovery of those bones important for aging and sexing (the pelvis and the skull). Soil samples were also kept from the area around the skull and the abdomen, for sieving in the laboratory in order to retrieve fragile and tiny cranial bones, such as the ear bones, or to

check for calcified gall and kidney stones. No bones were lifted until fully exposed (figs. 10.23, 10.36), all contextual information was recorded, and detailed plans and photographs were taken. Detailed photographs were also taken when bones or features appeared anatomically abnormal. In addition, excavators used a “burial record sheet,” specifically designed for documenting the recovery of skeletal material. The idea was to construct a clear and concise medium of primary documentation, which could be easily completed in the field, and then referenced later by archaeologists or bone specialists. These record sheets included data on the burial (type; offerings; measurements) and the associated skeletal remains (preservation; orientation; position).

Post-excavation procedures included the careful packing, labeling and transportation of the material to the facilities of the project, where it was subsequently cleaned and stored. Depending on bone fragility and soil or matrix type, dry brushing was conducted; otherwise, the bones were washed with water, with a soft brush and ideally under a small two-millimeter mesh. Whether dry brushed or washed, special attention was given to fragile bones (such as the facial bones), or to teeth with calculus deposits (tartar), as intensive cleaning would have damaged the samples. After being thoroughly dried, bones were packed in plastic bags; sealable bags were preferred for small bones or dental remains. Fragile and pathologic bones were protected by being wrapped in acid-free tissue paper. Large cartons, clearly labeled, were usually used for storing remains of more than one individual, because most of the excavated material so far is poorly preserved.

Aims of Bioarchaeological Analysis

The study of the human remains focuses on detailed anthropological (determination of sex, estimation of age and height), as well as paleopathological analyses (diagnosis and interpretation of the observed pathological conditions). The methodology of aging and sexing follows the criteria described by Buikstra and Ubelaker (eds., 1994), while the diagnosis of pathological conditions is based on established morphologies (e.g., Aufderheide and Rodríguez-Martín 1998; Ortner 2003). Macroscopic (visual) observation and radiological analysis are the primary applied methods. The application of an integrated bioarchaeological approach (integration of all available archaeological, cultural and biological data), is considered the best practice for understanding aspects of daily life in the past, and will encompass a diachronic study from the Archaic to the Hellenistic periods, comparing mortality patterns, as well as the development and prevalence of specific pathological conditions. As it is essential to provide raw data for any future comparative analyses—and estimation of disease prevalence—a detailed inventory of bones and teeth is included in the study. These data are tabulated, presenting the number of individuals affected by a pathological condition (crude prevalence rates) and the number of skeletal elements affected (true

prevalence rate). The next step includes the application of techniques, such as stable isotope analysis, in order to begin reconstructing dietary and weaning patterns across the samples.

Limitations of Bioarchaeological Analyses

Although the excavation of complete skeletons—the recovery and identification of individuals in the sample population—is a desirable goal, the specific conditions of sites and graves may preclude this ideal. One of the problems encountered at Kymissala, and not uncommon when dealing with multi-period sites, was that some of the graves had been looted in ancient or recent times, resulting in a severe disturbance of the burial context and the skeletal remains. Furthermore, the burial environment played a significant role in determining the overall condition and preservation of skeletal material, affecting the completeness of the skeleton, or resulting in alterations of the shape and surface of the preserved bones (such as erosion, discoloration, plant root and rodent activity) (Henderson 1987; Buikstra and Ubelaker, eds., 1994). These pitfalls increased the difficulty of aging and sexing, taking measurements, or attempting the diagnosis of certain pathological conditions; for example, the severe surface erosion of the bones precluded any attempt to observe possible cases of non-specific infections, such as periostitis; similarly, the poor preservation of articular surfaces limited the examination for degenerative joint diseases. Although it is widely accepted that from soil conditions to recovery methods, human remains are subjected to a number of intrinsic and exogenous factors that potentially complicate any attempt to reconstruct past life ways, an effort is taken to record and study every bone fragment.

Preliminary Results

The human skeletal material under current study has been retrieved from the Archaic burials of the site (sixth century). The material was very poorly preserved. All bones exhibit extreme surface erosion and rodent activity, while discoloration is also recorded. A total of ten individuals have been analyzed. In most cases, the necessary skeletal elements for sex determination and age estimation are missing or severe post-mortem damage is noted. Only four individuals are sexed: two males, one possible female and a female. All are adult individuals, but a more precise estimation of age is not possible. Few pathological conditions are observed, including dental diseases, hematopoietic disorders (*cribra orbitalia*), traumatic incidents (fractures) and a benign neoplasm (*button osteoma*).

Future Work

Although the study of the human remains at Kymissala has just begun, it is hoped that it will provide greater insight into the reconstruction of living conditions during the periods in question. Diachronic studies are rarely applied to the skeletal material from Greece, and it will be of great importance to study the development of the observed pathological conditions or process of possible dietary changes under specific cultural and environmental conditions from the same site. The study of the human skeletal collection from the central necropolis of Kymissala is expected to add significantly to the scarce body of evidence from the chronological phases in question and to form a solid background for similar analyses in the future.

Chryssi Bourbou

Appendix 2: Theoretical Issues of Topographic Applications

Over recent decades, international organizations have passed resolutions concerning the obligation for protection, conservation and restoration of monuments. The Athens Convention (1931), the Hague Agreement (1954), the Chart of Venice (1964) and the Granada Agreement (1985) are but a few of these resolutions, in which the need for accurate spatial, or geometric, documentation of monuments and sites is stressed as a fundamental prerequisite of their protection, study and conservation.

The geometric documentation of a monument, as a necessary primary stage of study and preservation, may be defined as follows (U.N.E.S.C.O. 1972): the action of acquiring, processing, recording and presenting the necessary data to determine the precise location, and the position, form, shape and size of a monument in three dimensional space at a particular moment in time; and as it has been shaped through time. Geometric documentation is considered an integral part of the general documentation of cultural heritage, comprising, among other things, historical, architectural, archaeological, and bibliographical documentation.

Geometric documentation consists of a series of necessary and accurate measurements, from which visual products such as vector drawings, raster images and 3D visualizations may be produced. These products usually have metric properties, especially those being suitable for orthographic projections. Hence one could expect from the geometric documentation a series of drawings, which present the orthoprojections of the monument on suitably selected horizontal or vertical planes. The most important properties of these products are their scale and accuracy, which should be defined at the outset of any fieldwork affecting the existing condition of the monument. While geometric documentation has traditionally been the purview of archaeological and architectural research projects, in recent years, other specialists

have become involved, such as surveyors and photogrammetrists, as technological advances have enabled them to produce interesting alternatives to normal documentation, affecting accuracy and global precision.

For geometric recording several surveying methods may be applied, ranging from the conventional simple topometric methods for partially controlled or totally uncontrolled surveys, to elaborate contemporary surveying and photogrammetric applications, for completely controlled surveys. The simple topometric methods are used only when the spatial unit is small or localized, or a targeted monument is simple in its dimensions and form. Surveying and photogrammetric methods are based on direct measurements of lengths and angles, either on the monument or on images thereof. They determine three-dimensional point coordinates in a common reference system and ensure uniform and specified accuracy. Moreover they provide adaptability, flexibility, security and efficiency. All in all they present undisputable financial merits, in the sense that they are the only methods, which may surely meet any requirements with the lowest possible total cost.

Description of Methods and Applications Available

Traditional topographical survey has been greatly affected by technological advances. Telemetry, using electromagnetic radiation of many forms, and digital imaging, have completely revolutionized fieldwork and the variety of results, which are affected as well by the evolution of digital processing. At the same time terrestrial laser scanning has been developed as another important tool to enhance the quality and the variety of the end products. Contemporary surveying and photogrammetric methods for the geometric documentation of a monument are always applied in combination (Ogleby and Rivett 1985; Carbonnell 1989; Georgopoulos and Ioannidis 2006). The emphasis of each depends on the accuracy specifications and on the level of detail required. These two main methods contribute to the final product. Survey provides accurate determination of specific points, which form a rigid framework within which details of monuments and features from the photogrammetric survey are placed. This in turn establishes point interrelationships in three-dimensional space necessary for photogrammetry and other procedures.

Nowadays it is possible to produce highly accurate measurements of single points, and to collect point clouds to determine the form, size and position of any surface at any detail, however complicated, from conventional or digital photographic images. The results are two-dimensional or three-dimensional vector or raster drawings that can be produced in printed or digital form. The photogrammetric methodology is capable of providing adequate overall accuracy common for all points measured and details surveyed. The photogrammetric methods may be categorized as single image or monoscopic, and as multi image or stereoscopic.

Photogrammetry in principle uses photographic images of the objects of interest as raw data. Complicated techniques have been developed over the years in order to

produce specialized visualizations— mostly orthogonal projections, vector or raster. Lately sophisticated digital techniques have been developed in order to produce three-dimensional views of these objects on computer screens, thus allowing the human observer to grasp the environment in three dimensions. Laser scanner technology has also been employed to this very end for the benefit of geometric recording of monuments with impressive results. In this way a process, which started at the real object with the direct measurements, returns to it via a series of digital image transformations and representations (Georgopoulos et al. 2003).

The three-dimensional modeling and visualization of monuments constitutes a very sophisticated and integrated method of geometric recording, affecting the documentation and preservation of cultural heritage. It is particularly effective when applied to the documentation of significantly large and complicated monuments, not easily grasped in their entirety by the human eye. When the three-dimensional modeling is composed by accurately detailed data, it is in fact the final product of a long series of extensive processes with a number of intermediate products, such as the two-dimensional and three-dimensional vector and raster plans. Supported by laser scanning instrumentation and related software, these three-dimensional renderings, together with traditional techniques, play an important role, as they are able to exploit the detailed work carried out by traditional surveying and photogrammetric techniques. Therefore for certain applications of three-dimensional visualization, traditional techniques are and should still be used.

Photogrammetric Representation at Kymissala

Photogrammetric methodology has been applied extensively during the past five years at the Kymissala archaeological site. In the following several examples are selected in order to demonstrate the main possibilities. The archaeological research zone of Kymissala is extensive, a wide mountainous and mostly wooded region interspersed with cultivated fields, mostly vineyards. One can only grasp the extent of the area and the interrelationships of the various specific sites when looking from above. For this reason color aerial photography was used to produce an orthophotograph of the whole region. Two strips of four images each were available at a scale of 1:10,000 covering the area. Several control points were determined using accurate GPS measurements in order to orient the images and produce a dense Digital Terrain Model (DTM) from which the final orthophotos were produced. These in turn were combined to form the final orthophotomosaic map (fig. 10.37), which was an indispensable tool for the management and planning of sampling and detailed study as it has all metrical advantages of a conventional map, but also carries photographic qualitative information.

Similar work has been done in two of the many monumental graves in the central necropolis, but at a much larger scale. Both graves were documented using a full

combination of the available methods—that is, topographic measurements, digital imaging and terrestrial laser scanning. These data acquisition methods resulted in an extensive geometric documentation of the graves both in two and three dimensions (figs. 10.38a–b).

Another example of such work is in the area of the Vassilika settlement, where we conducted an extensive documentation of the road network at a large scale (1:50), requiring vertical photography using a specially developed mega-tripod—a height of seven and a half meters—and a normal DSLR digital camera. Accurate point measurements were also taken in order to support the necessary processing. This project is ongoing and the results so far are presented in fig. 10.39.

Topographical science and technology is now in a position to support the work of archaeologists in many ways. Fieldwork derived from programmatic regional studies leads ultimately to protection, preservation and management of archaeological landscapes, sites, assemblages and artifacts comprising the research universe. The culmination of archaeological fieldwork normally involves conservation and, of course, publication of the results. It is apparent that all stages of conventional archaeological practice may be positively affected by the introduction and exploitation of digital topographic technologies. Remote sensing assists the non-intrusive and rapid detection of loci of interest. Instruments as such as spectroradiometers or ground penetrating radar—or even the simple processing of multispectral satellite images—may easily lead to the efficient location of subsurface and submerged finds, while contemporary survey technologies, such as photogrammetry, terrestrial laser scanning

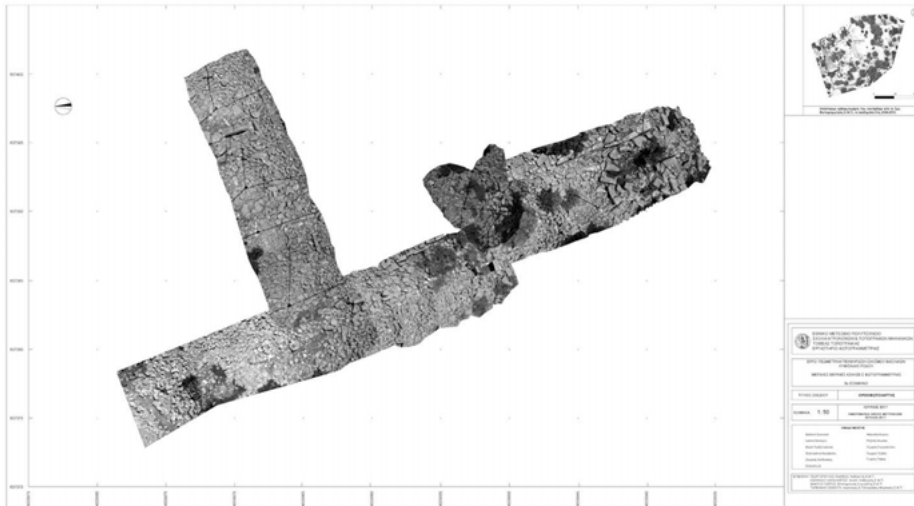


Figure 10.39: The orthophotomosaic of the road network in the Vassilika settlement (photo KARP-NTUA).

and digital imaging, may be used to produce accurate base maps for further study, or three-dimensional virtual renderings and visualizations, as already mentioned. The collected data may be stored in interactive databases, georeferenced, and managed according to the needs of the experts.

Andreas Georgopoulos

Appendix 3: Interrelational Database

“Digit” is a software application used for collecting and integrating data into a comprehensive database. It works either as local (intranet) or web (internet) implementation, on IIS server (Microsoft) or Apache server (open-source) independently of operating platform. It is fully functional either on a university server, accessible to multiple excavations, or in the computer of a single researcher. Digit is written in PHP language and the software uses as a backend a relational MySQL database, which can be used for simultaneous servicing multiple processes.

Digit was tested as a web application during the 2003–2006 excavations at Phalassarna, under the supervision of Manolis Stefanakis and Elpida Chatzidaki. The acquired experience and the relevant developments of the software were initially presented in the 10th International Cretological Congress (Kalogeropoulos 2006). Since 2006, “Digit” has become the main database software at Kymissala. The present phase of development is stable version “Digit V 2.0,” supporting as a CMS, *Eulimene*, a refereed academic periodical which publishes articles in classical archaeology, epigraphy, numismatics and papyrology (<http://www.eulimene.eu>).

Accelerating in the past two decades, the experimental practice of integrating archaeological data management with digital storage capabilities is perhaps, in a way, the invasion of the technology of computer systems into various cultural areas—a form of cultural technology. A significant problem from the beginning of this new practice has been the definition of the quality of digital information, the ease of access and the ability to cross reference diverse data streams. The problem was to preserve information, and then to be able to manipulate it and see it in very different ways (Martinez 2001, 9–16). That is to say, the use of computers in archaeological field projects offers clear advantages, but the “successful implementation requires a great deal of planning” (Dibble and McPherron, 1988, 431–440). The framework for the implementation of a database at Kymissala encompassed the essential interrelationships between activities, concepts, and results of fieldwork and research, with emphasis on reusing and analyzing any observations produced for every find or group of finds. Obviously fieldwork and analysis are bound together, but the first usually attracts greater attention than the second. The practice of digitization of an archaeological file, considering that issues of good practice and classification are taken into consideration, to a large extent restores the observed imbalance and also contributes to an integrated presentation of the archaeological project.

The Relational Database

Relational databases provide faster access to data through queries, and have built-in mechanisms in order to handle concurrent access. Digit is a specialized Content Management System (CMS) written in PHP. MySQL has a good interface with PHP as a database management system; it is open source, low cost, high performance, and portable, as it is supported from both UNIX and MS Windows systems (Converse, Park and Morgan, 2004, 6). Using the term *content management system*, we mean custom applications that rely on schemas for storing content within relational or object databases (Shklar 2003, 219). The relational database of “Digit” CMS consists of basic tables describing entities on a given hierarchy and auxiliary tables describing attributes of these entities in one excavated unit (context). All of these tables store indexed data, which makes them searchable.

The table below (table 1), derived from the Phpmyadmin 3.4.1.10 database management system (see www.phpmyadmin.net/), presents a specific data taxonomy for entities, such as phases, geographical locations, sites, contexts, finds and independent but related entities, strata, dating, and users. Each phase is a discernible period of time during which a geographical site is explored, and a site belonging to this geographical site is excavated. Excavation is a process that takes place in context units in order to expose an archaeological record, part of which is made up of context finds. In fact there is a “one to many” relation in this kind of taxonomy, which allows any operator to import and export data using proper SQL queries.

Table 10.1: Data taxonomy (derived from Phpmyadmin 3.4.1.10 database management system) (www.phpmyadmin.net/).

Table	Records	Type	Size	Comments
authors	2	InnoDB	16.0 KB	Authors of preliminary reports
cont	11	InnoDB	32.0 KB	Contexts (<i>entities</i>)
contcategories	5	InnoDB	16.0 KB	Categories of contexts (context attribute)
contcolours	13	InnoDB	16.0 KB	The Munsell soil color system (Actually any color system fits, according to specific research interests) for a given context in a specific stratum (context attribute)
contconsists	7	InnoDB	16.0 KB	Sand, stones, conglomerates, roots, etc. (context attribute)
contcorces	8	InnoDB	16.0 KB	Humus, depositions, shell stratum, tsunami stratum, artificial deposition, floor (context attribute)

Table	Records	Type	Size	Comments
contdedef	4	InnoDB	16.0 KB	Edge definition as vertical, scalar, inclining (context attribute)
contfindcategories	4	InnoDB	16.0 KB	Artifacts, ecofacts buildings, constructions (context finds attribute)
contfindgrouping	2	InnoDB	16.0 KB	Collective numbering of finds (context finds attribute)
contfindimages	6	InnoDB	16.0 KB	Context finds images (context finds attribute)
contfinds	6	InnoDB	16.0 KB	Context finds (<i>entities</i>)
contfindtypes	15	InnoDB	16.0 KB	Finds types: sherds, vessels, coins, bones, glass, etc. (context finds attribute)
contgrades	4	InnoDB	16.0 KB	Post-holes (context attribute)
contgrids	2	InnoDB	16.0 KB	Unified, different grids (context attribute)
contlogs	1	InnoDB	16.0 KB	Logs for a specific context (context attribute)
contmethods	2	InnoDB	16.0 KB	Excavation method (context attribute)
contplans	3	InnoDB	16.0 KB	Plans of contexts (context attribute)
contprofiles	19	InnoDB	16.0 KB	Horizontal, sloping etc. (context attribute)
conttextures	6	InnoDB	16.0 KB	Context texture: solid, dense, thin etc. (context attribute)
conttypes	3	InnoDB	16.0 KB	Context type: deposit, surface etc. (context attribute)
countries	4	InnoDB	16.0 KB	Automated geolocation
datingmethods	4	InnoDB	16.0 KB	Dating methods (dating attributes)
datings	5	InnoDB	16.0 KB	Dating (<i>entities</i>)
datingtypes	3	InnoDB	16.0 KB	Dating types: absolute, relative etc. (dating attributes)
districts	3	InnoDB	16.0 KB	Automated geolocation
findimages	3	InnoDB	16.0 KB	Images of finds
gallery_category	7	InnoDB	32.0 KB	Galleries' categories
gallery_photos	7	InnoDB	32.0 KB	Photos presented in every gallery
geositeimg	0	InnoDB	16.0 KB	Geographical site images (geosites attributes)
geositemap	1	InnoDB	16.0 KB	Geographical site maps (geosites attributes)

Table	Records	Type	Size	Comments
geosites	2	InnoDB	16.0 KB	Geographical sites (<i>entities</i>)
imgtypes	8	InnoDB	16.0 KB	East, West, North, South, South–East etc.
messages	1	InnoDB	16.0 KB	Work flow for successive users
phaselogs	6	InnoDB	16.0 KB	General logs for every period of excavation written by excavation supervisor
phases	4	InnoDB	16.0 KB	Excavating periods (<i>entities</i>)
provinces	3	InnoDB	16.0 KB	Automated geolocation
publications	2	InnoDB	32.0 KB	Publications for specific researches on CMS
relations	10	InnoDB	16.0 KB	Stratigraphic relations
siteenvs	5	InnoDB	16.0 KB	Site environment (site attributes)
siteexctechs	7	InnoDB	16.0 KB	Site excavations techniques (site attributes)
siteexctypes	3	InnoDB	16.0 KB	Site excavation types: vertical, horizontal expansion, mixed (site attributes)
siteforms	9	InnoDB	16.0 KB	Site forms: cave, harbor, fortress etc. (site attributes)
siteimg	0	InnoDB	16.0 KB	Site images (site attributes)
siteinvmethods	3	InnoDB	16.0 KB	Investigation methods: aerial, via satellite, etc. (site attributes)
sitemap	0	InnoDB	16.0 KB	Site mapping (site attributes)
sitephotos	0	InnoDB	16.0 KB	Photos intended for promotion purposes (site attributes)
sites	2	InnoDB	64.0 KB	Sites (<i>entities</i>)
stratig	2	InnoDB	32.0 KB	Stratigraphy
stratum	6	InnoDB	16.0 KB	Strata (<i>entities</i>)
substratum	4	InnoDB	16.0 KB	Substrata
texts	4	InnoDB	64.0 KB	General information texts on specific areas of research, actually a library
tutorials	2	InnoDB	32.0 KB	Tutorials on setting up and using Digit
_columnschema	281	InnoDB	96.0 KB	<i>For administrative purposes</i>
_fkschema	0	InnoDB	16.0 KB	<i>For administrative purposes</i>
_languages	2	InnoDB	16.0 KB	<i>For administrative purposes</i>
_prefs	9	InnoDB	16.0 KB	<i>For administrative purposes</i>

Table	Records	Type	Size	Comments
_rendertypes	12	InnoDB	16.0 KB	<i>For administrative purposes</i>
_tableschema	44	InnoDB	32.0 KB	<i>For administrative purposes</i>
_userlevels	4	InnoDB	16.0 KB	user levels: personnel, students and supervisors (<i>attributes</i>)
_users	6	InnoDB	16.0 KB	Users are <i>entities</i>
60 tables	601	—	1.2 MB	

Management and productive use of the archaeological record is a complex and laborious task, which requires careful planning and organizational expertise. Until recently, archaeological recording used analog means of documentation such as notebooks, catalogs of finds, two-dimensional analog plans and photographs. These instruments, however, despite their contribution to the recording process, make it difficult to access and crosscheck data records, thus limiting the interpretative capabilities of researchers. Digital databases, however, are able to present cross-references and any kind of audiovisual material that has been imported into them by operators. Undoubtedly documentation of an excavation is a special area of digital technology because of the theoretical, methodological and practical particularities of each excavation. That said, increasing technological developments and the continuing accumulation of experience in the development of digital information systems for archaeological use opens new perspectives for the most effective and innovative adoption of digital technology in the research.

Hierarchical Data Model and Table Relationships

A one-to-many relationship actually allows records of one table to be connected to many records of another table without the limitations imposed by resorting to redundant or limited numbers of fields in a single table (fig. 10.40). This reduces the size of the database and increases the flexibility and performance of queries operating on that data (Erickson 2009, 208). Thus, according to the requirements of the excavation conducted at ancient Kymissala, a particular period of time—a phase—encompasses spatial entities such as the geographical archaeological area (geosite), which includes a series of archaeological sites. It is a defined geographical area with definable topographical features. This demarcated area has been both a well-defined ecological and cultural territory; a specific site or sites; and of course a context unit within specific sites. This time-space connection in one excavation event permits dissociation of discernible but parallel excavations.

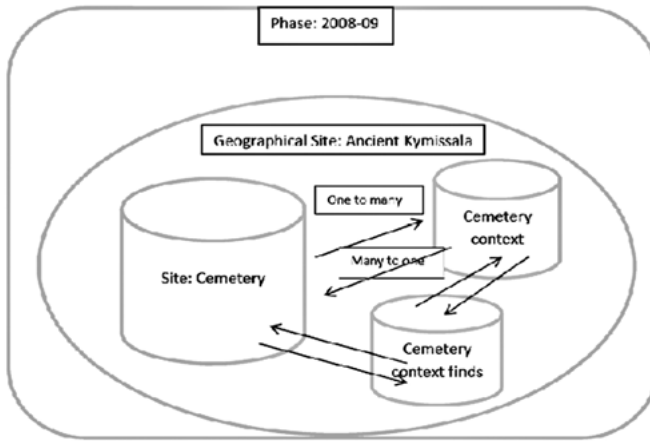


Figure 10.40: Digit: hierarchical data model and table relations (drawing K. Kalogeropoulos).

Modular Design and Expansibility

CMS “Digit” is able to store, retrieve, edit, update and control content stored in a database with standard editorial tools—Graphical User Interface (GUI). It allows content creators to submit content through forms without any technical knowledge of HTML or the need to upload files to the server. “Digit” also has a modular design that permits the development of multiple queries and responses since it is a server-side application. In practice, that means that it can be expanded according to the specific needs of an excavation through new modules, without changing the rest or the core of the software application. It is also capable of providing the proper environment for publishing content. Content creation functionality includes separation of presentation and content, utilization of illustrations in different contexts and metadata support. Other features include template availability through style sheets, and allow for the integration of multiple formats on rendering text.

Keeping in mind that a content management system, even one created for specific reasons, is a concept rather than a product, and embraces a set of processes (Browning and Lowndes 2001), “Digit” handles all necessary processes for documenting the archaeological record, from daily logs to find classification and illustration. Moreover it can render information, general or specific, in different formats, from simple text to PDF documents. In any case, both the developers of such specific CMS and archaeologists should keep in mind that data are not actual objects—they are only measurements and observations we make about these objects, and more or less, constructions or impressions of the way we see things (Sullivan 1978, 189).

Konstantinos Kalogeropoulos

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Kalliope E. Galanaki, Christina Papadaki, and Kostis S. Christakis

11 The Hellenistic Settlement on Prophetes Elias Hill at Arkalochori, Crete: Preliminary Remarks

Abstract: The Hellenistic settlement (third century B.C.) on the hill of Prophetes Elias at Arkalochori is situated in a fertile inland plain that has been densely inhabited from the Neolithic period. During the Classical, Hellenistic and Roman periods, the site was one of several small urban, semi-urban and rural settlements within the region of important city-states in central Crete. The recent program of excavation at the site permits a preliminary report on the remains of the settlement. The domestic units belong to the so-called Cretan linear house type, common in many areas of the island in the Hellenistic period, while the distribution of artifacts, and built and rock-cut features provide insights into the spatial organization of domestic units and everyday activities of resident households. Food processing, storage and consumption comprise the main activities recovered through excavation, and provide comparative assemblages for contemporary settlements on the island. The pithoi found in the houses are evidence of a flourishing pottery workshop in the Pediada plain—evidently active from the Archaic period—and reveal interesting patterns of the use, reuse, and display of storage containers. The use of Archaic pithoi in Hellenistic houses highlight their significance as heirlooms and prestige items, and as symbols of the wealth and status of their owners in the community. Agricultural storage is discussed in the broader context of domestic subsistence behavior; as the cornerstone of the household economy; and a marker of the moral and social position of the family. Capacity estimates and their interpretation point to different degrees of subsistence autarky.

Introduction

The hill of Prophetes Elias at Arkalochori Monofatsiou in central Crete is set in the middle of a fertile plain with abundant traces of habitation since the Neolithic period up to the present day (Marinatos 1935, 212–220; Tyree 1974, 28–29). It is a naturally fortified location providing direct control of the main routes leading to Knossos and the north coast of as well as visual contact with many important sites in the district of Pediada, such as the Minoan palace site of Galatas to the northeast and the Minoan peak sanctuaries of Liliano and Mameloukou to the east (fig. 11.1).

The region of Arkalochori is mainly known because of a small cave on the west slope of Prophetes Elias, where a hoard of Neopalatial metal objects was recovered, including some miniature and numerous oversized bronze, gold and silver double axes, bronze swords and daggers. The cave is considered to have been either the location of a cult, probably of a warrior deity (Marinatos 1935, 212–220; Faure 1964, 160–162) or of a metal-melting and casting workshop (Marinatos 1962, 87–94). Perhaps it also served, when times were desperate, as an occasional hiding place of precious metal objects, coming perhaps from the nearby palatial center of Galatas. This latter site obviously enjoyed a remarkable position in the local acquisition and administra-

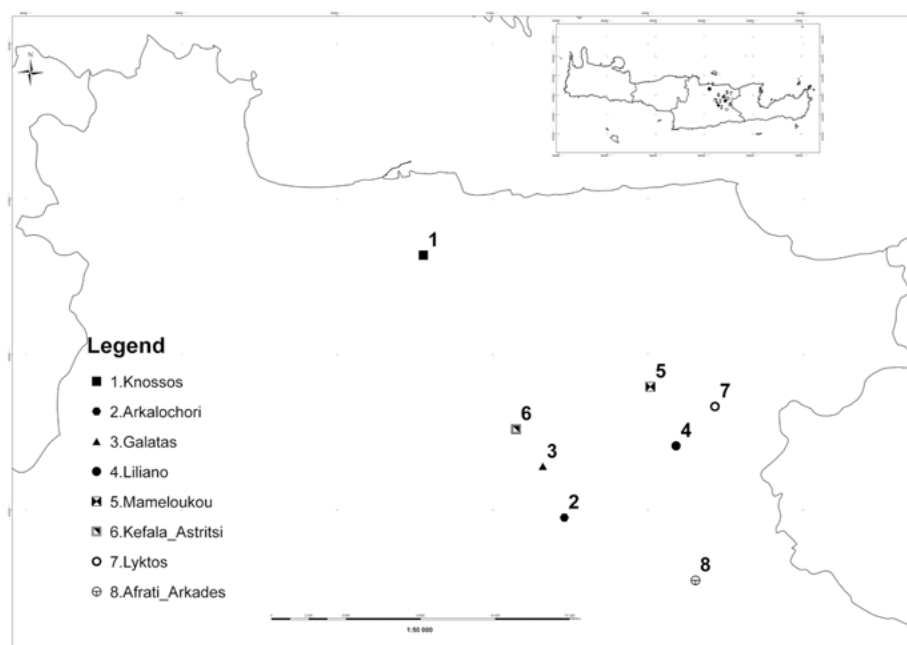


Figure 11.1: Map of central Crete with sites of the Arkalochori region mentioned in the text (drawing M. Spyridakis, 23rd Ephorate of Prehistoric and Classical Antiquities).

tion of wealth; its very setting underlines the great importance of this specific area during the Bronze Age (Rethemiotakis 1999, 105–107).

The expansion of Bronze Age occupation in the broader area has been confirmed both by past and recent rescue excavations south of the Arkalochori cave (Hazzidakis 1912–1913, 43), and southeast of Prophetes Elias (Galanaki and Triantafillidi, 2011). This is confirmed by the occasional pottery scatter and, in particular, by the results of recent intense surface survey (Panagiotakis 2003, 380). Furthermore, from the relatively shallow rocky chasms of the northeast edge of Prophetes Elias there have been discovered numerous fragments of human and animal votive figurines demonstrating the presence there of a Minoan peak sanctuary (Galanaki and Triantafillidi 2011). After Late Minoan I, the region flourished until the end of the Bronze Age (Panagiotakis 2003), while during the historical times many important city-states (fig. 11.1) developed, such as the Kephala of Astritsi (possibly ancient Diatonion), Lyktos, Kasteli, and Aphrati (Arkades). Along with a number of other smaller urban, semi-urban and rural settlements (Panagiotakis 2003, 327–430), a series of interconnected sites had developed, in which the settlement on Prophetes Elias is included, especially during the Classical-Hellenistic and Roman periods, as the archaeological remains on the hill and its neighboring sites testify.

The Hellenistic Houses on the Prophetes Elias Hill

On the steep western edge and partially collapsed north slope of Prophetes Elias (fig. 11.2), the architectural remains of a Hellenistic fortification wall have been identified (fig. 11.3). It was most likely built during the Archaic period or even earlier, and used perhaps until the Venetian times (Coutsinas 2010, 188–197; Patsiada 2009, 11–48). Moreover, on the prominent northeast edge of the same hill, a watchtower (figs. 11.4, 11.5) contemporary with the wall has been recovered. On the excavated southeast and northeast borders we have investigated a dense unit of linear-type Hellenistic houses of the third century B.C. (fig. 11.6), a pattern of building that conforms to the usual spatial organization seen in the majority of Cretan mountain cities of this period, especially in the use and reclaiming of a pre-existing domestic nucleus (Galanki and Triantafillidi 2011).

Handsomely wrought blocks quarried from the natural limestone bedrock of the area, arranged in the isodomic system, were used for the construction of the houses, especially on the southeast slope of the hill. In contrast, structures partly cut into the limestone dominate the houses of the north and northeast slopes (fig. 11.6). All houses conform to natural terraces: north-south oriented access ways and monumental east-west aligned stepped pavements defined the clusters or neighborhoods of this acropolis (fig. 11.7). The facades and the entrances of the houses were set on the east and led to either a completely or partially roofed *prothyron* (fig. 11.8). Thus one



Figure 11.2: Prophetes Elias Hill: rock cut houses from the east (photo I. Papadakis-Ploumidis).



Figure 11.3: West edge of Prophetes Elias Hill: Hellenistic fortification wall from the north (photo I. Papadakis-Ploumidis).



Figure 11.4: Northeast edge of Prophetes Elias Hill: rectangular built watchtower from the southwest (photo I. Papadakis-Ploumidis).



Figure 11.5: Northeast edge of Prophetes Elias Hill: rectangular built watchtower from east (photo I. Papadakis-Ploumidis).



Figure 11.6: Northeast edge of Prophetes Elias Hill: rock-cut houses with monumental east-west aligned stepped road from east (photo I. Papadakis-Ploumidis).

could enter a semi-open space, where a built or rock-cut hearth was placed: when situated near a corner, it was likely connected with food preparation, though when placed in the middle of an interior room, it was better suited to heating the space. The general pattern of the domestic architecture of this period places the hearth, and consequently the cooking area, in the warmest part of the house (Westgate 2007, 430). Two freestanding stone pilasters and a monolithic threshold constitute a monumental entrance to the main hall, in the western part of which were usually placed work and storage areas. Pithoi were arranged in rows (Mandalaki 1997), generally at either side of the room's entrance, set on rectangular or circular stone bases (figs. 11.9, 11.10), as well as into intentional rock-cut cavities in the floor itself (fig. 11.11). In some cases, oversized pithoi were also found in work areas. As mentioned above, rock-cut structures were also included as part of the walls as well as column bases, cisterns, wine presses and a range of grinding and processing installations (fig. 11.12).

The linear arrangement of these houses (fig. 11.13) seems to have been strongly affected by the considerable variation in the relief of the terrain, but it is also considered as reflecting the influence of specific social patterns. The planning of access, for example, has been interpreted as indicating both a lack of privacy and the presence of social restrictions: in order for someone to enter a specific room, they would need to pass through a series of other spaces, each communicating only with their immediate neighbors along one axis. On the other hand, the existence of storage areas and work areas testifies to the autonomy of each household. Here it is worth noting that some changes took place over time: primarily, the division of the courtyard into smaller parts, probably due to a lack of space and the possible simultaneous need for additional small-scale domestic work areas. Such changes testify to the increased importance of the domestic economy, as well as a clear conservatism with the concentration of many vital every-day activities inside the house (fig. 11.14).

The houses of Prophetes Elias have been compared to those of other contemporary Cretan sites (Hadjimichali 1971; Kalpaxis, Furtwängler and Schnapp 1994; Ault and Nevett 1999; Schoenauer 2000; Vogeikoff-Brogan and Papadakis 2003) such as Rokka, Polyrheinia, Hagia Eirene, Eleutherna, Axos, Hagios Thomas, Vakiotes Sokaras, Lyktos, Trypitos, Lato, and Praisos (Westgate 2007; Galanaki and Triantafyllidi 2011 with extensive bibliography). As at Prophetes Elias, the Hellenistic houses at these sites constitute a category of the so-called Cretan Hellenistic linear houses with hearth rooms. The organization of space stands in marked contrast to the typical classical peristyle house, the most widespread and well-developed architectural type of the period, with its living, work, and storage areas organized around a central courtyard (Walter-Karydi 1996). In the normative Cretan house, rooms are set in a row on one axis, with their built or rock-cut hearths, reflecting either continuity or a revival of the Early Iron Age and Archaic concept of household architecture (Haggis et al. 2011). As such they may be considered evidence for the introverted, if not conservative, rural societies existing at the periphery of the Hellenistic world (Westgate 2007, 434–441). The positioning of smaller rooms within the houses enables a clear delineation of



Figure 11.7: Northeast edge of Prophetes Elias Hill: rock-cut houses from the east (photo I. Papadakis-Ploumidis).



Figure 11.8: Southeast slope of Prophetes Elias Hill: linear houses (prothyron) from the east (photo I. Papadakis-Ploumidis).



Figure 11.9: Work area of a house: rectangular and circular stone bases for pithoi from the east (photo I. Papadakis-Ploumidis).



Figure 11.10: Work area of a house: rectangular and circular stone bases for pithoi (photo I. Papadakis-Ploumidis).



Figure 11.11: Rock-cut cavities for pithoi in the floor of a house (photo I. Papadakis-Ploumidis).



Figure 11.12: Northeast edge of Prophetes Elias Hill: base of post support column and cistern from the east (photo I. Papadakis-Ploumidis).



Figure 11.13: East slope of Prophetes Elias Hill. Rock-cut foundations for houses from the east (photo I. Papadakis-Ploumidis).



Figure 11.14: Houses on the east slope of Prophetes Elias Hill: domestic assemblages (loom weights and mortar) (photo I. Papadakis-Ploumidis).



Figure 11.15: Work area of a house on the southeast slope of Prophetes Elias Hill: spouted press bed from the north (photo I. Papadakis-Ploumidis).

broad functional zones to be recognized. In the examples mentioned above, as well as in the houses at Arkalochori, no obvious distinction exists between private and public spaces (such as courtyards) in their interior; in all likelihood, the social organization of the community created a type of house in which most domestic activities were conducted in common spaces dedicated to a number of possible functions. No significant social or economic differences can be discerned between households.

As for the finds, the excavation revealed a thick destruction layer with plenty of collapsed architectural remains and debris, including roof tiles, and also a large quantity of fragmentary Archaic, as well as “archaizing,” pithoi mixed with Hellenistic coarse and fine storage, cooking and table wares of the third century B.C. Many stone grinding tools were also recovered.

A spouted press bed of stone (fig. 11.15) was found in situ in one house: its circular flat base has a peripheral chisel-cut groove ending in a spout from which the liquid product poured into a receptacle that was firmly positioned on a semi-circular structure below. This type of press, with slight differences (Blitzer 1995, 486), can be found in Crete from the Bronze Age on (such as at Knossos and Kommos). The shallowness of this stone bed, indeed, indicates that it could be part of an olive-press installation,

though there are no other indications, such as a press bench, weight stones, or beam sockets. Well-documented examples have been found at Idalion in Cyprus (Hadjisavvas 2003), where they are part of built installations dating to the late Classical and early Hellenistic periods. Along with the above-mentioned finds appeared various stone, iron and copper tools (e.g. querns, grinders, pestles, whetstones, hammers) as well as clay lamps, spindle whorls, and loom weights of all the common types, and coins.

These finds reveal a well-defined domestic context that provides some insights into both the spatial organization and the every-day activities of their inhabitants. It is obvious that the rooms were first of all used for food processing and storage; the great quantity of various grinding stone tools and the possible olive press installation provide tangible evidence for intensive local agricultural production. The survival and reuse of the Archaic pithoi—some centuries after their manufacture—is especially noteworthy and is discussed further below.

Archaic Pithoi in the Hellenistic Houses: A Brief Case Study

As mentioned above, many fragmentary relief pithoi (fig. 11.16) were revealed in situ mainly in the storage areas and occasionally in the work areas of the houses, among Hellenistic cooking and table wares of the third century B.C. Mainly dating to the sixth century B.C., the pithoi are decorated with impressed, incised and plastic ornamentation. The excavations at Prophetes Elias also revealed a fragmentary oversized example decorated with two horses and their groom representation (fig. 11.17). The noteworthy presence of Archaic pithoi from excavations of Hellenistic sites in east (Whitley 2011, 29–31, figs. 28–32) and central Crete is extremely significant for understanding the domestic economy and society of this period. Such pithoi have been recorded in Hellenistic deposits in the Little Palace well at Knossos (Callaghan 1981, 36–37; Egglezou 2005, 34), at Apollonia (Alexiou 1973, 560–562; Ioannidou-Karetsou 1973, 200–212; Egglezou 2005, 31), at the northwest part of the central court of the Minoan palace of Phaistos (Levi 1969, 153–176) and at the nearby area of Chalara (Levi 1967–1968, 94–95, figs. 44–45; Callaghan 1981, 37). Archaic pithoi have also been found at many sites of the Pediada province (Egglezou 2005, 31, 34, 94, 110): in the central Minoan building in Kasteli (Rethemiotakis 1991, 996; Egglezou 2005, 110), Lyktos at Koutela (Lembessi 1969, 418; Lembessi 1971, 493–499; Egglezou 2005, 94), Anemomyloi (Platon 1957, 336; Lembessi 1971, 499; Egglezou 2005, 94), Voreina, northeast of the Roman bouleuterion (Lembessi 1971, 497), and northwest of Afentis Christos Church (Rethemiotakis 1983, 354; 1984, 50–65; Galanaki, Papadaki, and Christakis 2007). Well-documented parallels for such pithoi have also been found at many Late Geometric–Early Archaic sites of the same prov-



Figure 11.16: Fragments of Archaic relief pithoi (photo I. Papadakis-Ploumidis).

ince, such as at Kasteli (Schäfer 1957, 25; Kastanakis and Triantafillidi 2007), Kastamonitsa (Schäfer 1957, 17), Arkades (Levi 1927–1929; Schäfer 1957, 16–17, 22; Lembessi 1971, 499–500), Smari (Hadzi-Vallianou and Efthimiou 2000, 539–540), Kassanoi (Alexiou 1972, 621, pl. 580z), and Astritsi (Schäfer 1957, 13, 16). The same is true in many sites of the same period in central and eastern Crete like Knossos, Amnissos, Archanes, Gonies, Prinias, Phaistos (Schäfer 1957, 12, 13, 16, 20, 21, 24) and Dreros, Kavousi, and Lithines (Schäfer 1957, 17–18, 22), respectively (Demargne 1970).



Figure 11.17: Pithos fragment decorated with horses and groom (photo courtesy of the 23rd Ephorate of Prehistoric and Classical Antiquities).

These Cretan Archaic pithoi of the late seventh–early sixth centuries B.C. have been found in closed destruction or abandonment deposits of Hellenistic date and are easily recognized by their typological and structural features, as well as by their consistently repeated relief decoration of stereotypical motifs organized in *triglyphs* and *metopes*. Such pithoi were used in the domestic economy as storage vessels for agricultural products, a fact that is reinforced by their find-spots in well-defined food processing and storage areas of Hellenistic households, as indicated for the most part by the presence of grinding tools, cooking vessels and ecofacts. The above observations also testify to the lingering existence of a flourishing pottery workshop in the heartland of the Pediada province, as well as its great range of activities and of course the durability and good quality of its products. The existence of these Archaic pithoi in Hellenistic horizons may be explained first in practical terms of their durability and utilitarian value; and second, by their symbolic value as family heirlooms and prestige items, symbols of the wealth and status of their users in the community (Ebbinghaus 2005, 54–58; Haggis and Mook 2011, 379–380).

Staple Storage in the Hellenistic Houses of Prophetes Elias: The Case of House C

Production and storage of agricultural produce is the cornerstone of the domestic economy. It substantially contributed to the nutritional requirements of the household and played a prominent role in the generation of surplus (Halstead 1989; Christakis 2008, 9–12). Domestic storage also contributed to the social position of a household within its community and region (Christakis 2008, 11). The act and process of storage of agricultural goods connected these resources to requirements and desires of the society, and thus contributed to perceived social status. The house owner, by means of careful and systematic planning of storage, achieved the support of his family during the unproductive season, while strengthening his position and appreciation not only within the family group but also within the broader community. Domestic storage strategies varied greatly according to the exigencies of specific environmental, climatic, and social-cultural circumstances (Smyth 1989). Storage structures did not have a standardized layout and were either located within the domestic unit or in freestanding buildings nearby.

The artifact assemblages recovered from House C, a residence on the east side of the site, show that storage was an important activity of the occupants of this unit. Three large pithoi were carefully placed in the storeroom of the house. The capacity of the pithoi is estimated at 900–1,200 liters, though the pithoi have not been reconstructed—the volume is based on an average storage capacity of 300–400 liters for a large Archaic pithos. Querns and grinders were found in the storeroom and probably served for the processing of staples. Cereals, pulses, olive oil, and wine, basic foodstuffs of the Mediterranean household's diet, were probably kept in these pithoi (Christakis 2005, 50–52, 64–65). Goods could also be stored in vessels smaller than pithoi, or in perishable containers such as baskets, cloth sacks, goatskin bags (for wine), pits, and wooden boxes.

Based on a model that converts storage capacities into subsistence autarkies (Christakis 1999; 2008, 19–34, 37–38), the storage potential of a 900–1,200-liter pithos could provide nutritional support for a household of five adults for a period of eight months. Fresh goods, besides those stored in pithoi, may also have contributed to a household's dietary requirements. There is no evidence, however, for the accumulation of surpluses that would have enabled householders to face food shortages in periods of subsistence stress. The availability of edible goods throughout the year would not have been steady. Ethnographic information from pre-industrial Crete shows that the various types of goods in the cellar of each household were plentiful in the months immediately after the harvest but gradually diminished. The spring months must have been difficult ones for the households, as their stores were gradually depleted.

We do not know how far the picture observed in House C can be generalized for other domestic units of the settlement, as more excavation is needed. In three other domestic units, Houses B1–3, on the southeast side of the slope, we have recovered eight large pithoi, a substantial assemblage for an ordinary household. This probably means that the occupants had in their stores considerable amounts of goods that could cover their nutritional requirements, while providing capital for investments and support for periods of stress.

Some interesting insights on domestic storage behavior have been provided by Olynthian households (Cahill 2002, 226–236). Most houses lacked storage containers and only a few were furnished with three to five large pithoi. These different pictures, in relation to the rest of the archaeological testimonies, suggest that households in different parts of the city followed different economic strategies (Cahill 2002, 281–285). Some preferred to store a year's supply of food or more, while others may have stored their produce in peripheral complexes in the countryside. Still other households specializing in industries or mercantile activities would have been involved more closely in the market and the monetary economy. This involvement may have encouraged them to deal with their produce differently. Different economic strategies adopted by households at Olynthus demonstrate divergent practices and social configurations that are difficult to reconcile with unilateral models of ancient economies. Some households were evidently concerned with ensuring a reliable subsistence (Wolf 1969; Scott 1976). House owners prefer to minimize risk—selecting production strategies that enable them to reduce the effects of crop failure—rather than maximize their average return. Other householders may have chosen to make more risky investments (Popkins 1979). Their strategies are made with an eye to both the short- and long-term risks and benefits. Whereas a “moral” economy emphasizes consensus and collectiveness, a “political” economy develops patterns of interaction suggesting conflict and competition. Similar economic behaviors were probably adopted by households at the settlement at Arkalochori. The evidence, however, is limited when it comes to providing a clearer and more representative picture of the economies practiced in this important center of Crete.

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Evi Margaritis

12 Cultivating Classical Archaeology: Agricultural Activities, Use of Space and Occupation Patterns in Hellenistic Greece

Abstract: This paper explores the farming regimes and economic organization of three Hellenistic country houses and an urban building located within the harbor zone of a polis in the region of Macedonian Pieria. The focus of the study is the evidence of the plant remains that suggest that the sites employed different agricultural practices and had diverse economic functions. The large estate of Platania shows that a diversified regime was practiced; the site of Kompoloi, on the other hand, represents a specialized industry, focusing primarily on the cultivation of vines and the production of large quantities of wine, while Douvari, a small farmhouse, most likely belongs to the agricultural territory of the much larger estate of Kompoloi. The urban building at the site of Krania is identified as a *kapeleio*, offering food and drink to visitors to the harbor area, rather than being a domestic establishment. This paper examines the economy of the sites, how they were managed in the routines of everyday life, and addresses questions of seasonal or permanent occupation of houses located in the Greek *chora*.

Introduction

Classical archaeology has been widely criticized for the lack of integration of various components of material culture when interpreting excavation results (Ault and Nevett 2005). In most cases the focus has been mainly on the public monuments and burial sites, leaving the analysis of domestic space largely unexplored. It has been the norm that architecture and artifacts, comprising the limits of archaeological investigation—approached as isolated and decontextualized objects—have significantly undermined the identification and interpretation of human activities within the ancient household (Ault and Nevett 2005). For houses located within cities, reconstructions of domestic activities have been attempted at different levels and scales of analysis at sites such as Olynthus and Halieis. At Olynthus, there has been an attempt to contextualize and reconstruct daily activities long after excavation and relevant publication (Cahill 2002), while the site of Halieis offers a picture of urban domestic life and its spatial configuration (Ault 1994). More recently, efforts have been made to address a set of questions concerning household organization with a focus on specific activities (Nevett 2010; Tsakirgis, forthcoming), as well as in broader social and economic site histories or in regional comparisons; the latter on the basis mainly of survey data.

The situation is worse when we move outside the limits of the Greek city, where the investigation focuses on the *chora*, the countryside. The best documented, in the sense that final publications are available, are the houses of Dema and Vari in Attica. Specific interpretations have been offered of the functions of these houses (Jones,

Graham, and Sackett 1962, 1973); while pottery is interpreted in terms of chronology and typology rather than spatially differentiated activities. In fact there is no information concerning context for pottery and small finds, making it impossible to reconstruct the use of space (Ault and Nevett 1999).

More recently, exploration of the Greek *chora* has been advanced by systematic regional surveys, and information on agricultural activities, occupation patterns, farming strategies and demographic changes has emerged (e.g. Bintliff and Snodgrass 1985; Cherry, Davis, and Mantzourani 1991; Mee and Forbes, eds., 1997; Cavanagh et al., eds., 2002; Alcock 2007; Lolos 2011). For site types and size, it has been suggested that Vari and Dema represent more “elaborate” structures, suggesting a hierarchy of rural dwelling types (Alcock 2007). Sites between seventy and 5,000 square meters were considered farmsteads in Boeotia (Bintliff and Snodgrass 1985); at Methana, farmsteads of the Classical and Hellenistic periods were generally smaller than 2,000 square meters (Foxhall 1997); and for the area of southern Argolid, it was proposed that a farmhouse of 3,300–4,600 square meters indicates a wealthy household with agricultural production for surplus and capital rather than a subsistence economy, which is characterized by sites 2,500 square meters or less (Acheson 1997). The various regional surveys have shown that there is a much greater presence of rural dwellings in the countryside than was previously thought. This is taken to be indicative of intensive cultivation, confirming the fact that living on the land would lead to the higher yields especially necessary for the smaller land holders (Garnsey 1988). The presence of such a large number of rural buildings has also sparked debate on permanent or seasonal patterns of occupation (see discussion below).

Previous analyses of the role of farming, food production and processing in the *chora* have been dependent on textual sources, which in fact have little to say on the matter (Osborne 1985), while a lot of information comes from the ethnographic record (Forbes 2007). Archaeobotanical and archaeozoological data have until recently been limited in quantity even for the urban settings where more excavation has taken place (Foxhall, Jones, and Forbes 2007). This paper aims to document activities of farming, food processing, production and disposal of food on the basis of the plant remains recovered from country houses and from an urban house located within the harbor zone of a polis. The plant remains are examined not only to identify the use of plants by humans, but also to reconstruct the spatial demarcation of food processing, preparation and disposal. The deposition of the plant material is socially and culturally defined, since it entered the archaeological record as the result of specific activities. The spatial pattern of the archaeobotanical material within the buildings under study can be used to reconstruct these activities. The paper will examine the economy of the sites; how they were managed in the routine of everyday activities; and the question of seasonal or permanent occupation of houses located in the Greek *chora*. This paper not only demonstrates essential interpretative techniques such as archaeobotanical analysis in the study of archaeological contexts, but emphasizes that in the absence

of such work, knowledge of significant aspects of daily life would have been permanently lost.

The Sites under Study

The sites under study are located in the southern most area of Macedonia, very close to its borders with Thessaly. Near the modern city of Platamonas, three country houses have been excavated: Kompoloi, Douvari and Platania, while at the urban center of Herakleion, the site of Krania is located very close to the sea, and the building presented here is located in the harbor zone of the city. In the broader area two more cities are located: Phila and Leivithra (fig. 12.1).

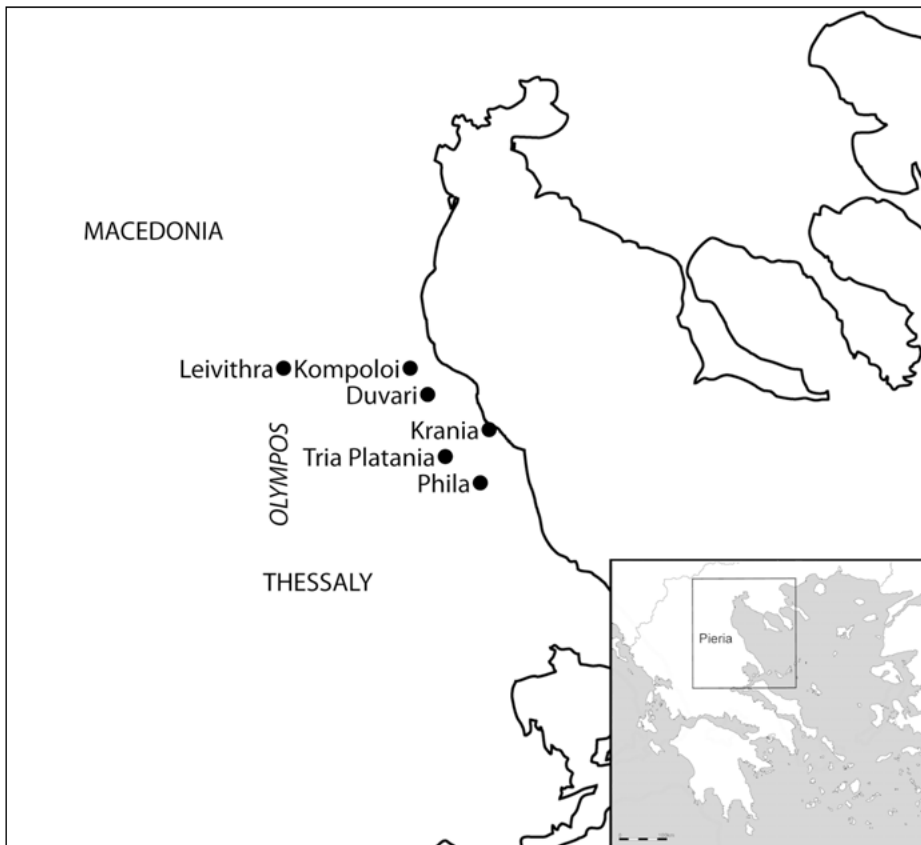


Figure 12.1: Map of southern Pieria with sites mentioned in the text (after Margaritis 2014).

Kompoloi

Kompoloi is a country house with living quarters and a storage area covering an area of approximately 1,350 square meters, dating to the second half of the fourth to the early third century B.C. (fig. 12.2). The storage area was dominated by a stone-paved central courtyard containing only pithoi, collapsed building material, and a few amphora fragments. Twenty-two pithoi of various sizes were found in the storage area while another thirty-two pithoi were found across the site elsewhere (Poulaki 2004; Poulaki, Mourati, and Margaritis, forthcoming).

In the living quarters, the courtyard was surrounded by stoas, while external stoas were also located outside the north wing of the building. On the eastern side of the living quarters a basement was excavated, suggesting the presence of a tower. The finds in the living quarters were numerous and consist of coarse and fine pottery, coins, tools, and loom weights, representing a wide range of domestic activities. Other structures, such as hearths, a well, and roofed areas housing pithoi, were

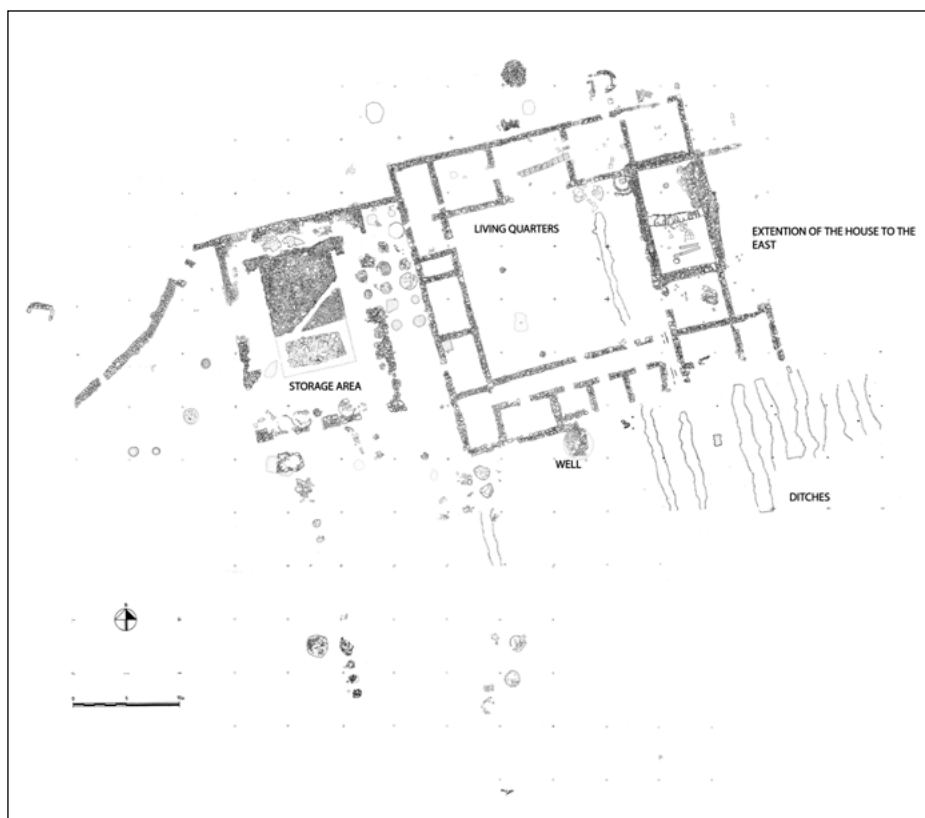


Figure 12.2: Site plan of Kompoloi (courtesy of E. Poulaki).

found outside the complex, indicating various external domestic activities. A series of parallel ditches was also discovered south of the living quarters, possibly indicating the presence of a field or garden plot in close proximity to the house. There is also evidence that Kompoloi extended toward the east, with another courtyard surrounded by rooms and stoas, suggesting that the site was considerably larger than the excavated area.

The archaeological finds of Kompoloi, its size, storage facilities and the vast quantities of material remains, indicate a well-organized house, perhaps not a typical farmhouse, but an estate, or *αγρόπαιλις*, similar to contemporary wealthy households, such as House IV at Eretria, and the Houses of Dionysus and the Rape of Helen at Pella (Morris 2005).

Douvri

Located 900 meters north of Kompoloi, the contemporary site of Douvari was only partially excavated, as a large part had already been destroyed by modern construction work before systematic fieldwork. The excavation revealed remains across an area of approximately 350 square meters. The architecture consists of at least two rooms with mud brick walls; various pithoi were recovered in situ, while transportation and cooking vessels comprise the majority of the pottery. Douvari, unlike Kompoloi, can be described as a typical farmhouse, a relatively small building located in the countryside, evidently involved in farming—similar in location and size to rural houses excavated in Attica. Approximately 100 meters to the north, excavation revealed another building of approximately the same size, called, Douvari II, which is contemporary with Douvari I. It also had fine pottery and pithoi in situ, suggesting the presence of farmhouses in close proximity to each other (Poulaki 2004).

Platania

A contemporary building at Platania, located seven kilometers southeast of Kompoloi, is also an estate, measuring 2,400 square meters, but if the external areas are included, the size approaches 5,000 square meters or more. The building consists of rooms surrounding an open courtyard with stoas, an arrangement similar to that at Kompoloi. A storeroom is found in the northeast corner of the building, containing numerous pithoi, some of them evidently broken and repaired in antiquity. The courtyard contained a well, a pottery kiln and a tower (fig. 12.3). Unlike Kompoloi, where the tower is integrated into the building, at Platania, the tower is a freestanding structure in the center of the courtyard. There are also many external areas of activity: a roofed stoa outside the east wing of the building, a threshing floor to the south, and a very long enclosure on the north (Poulaki 2003; Gerofoika, in prep.). The enclosure,

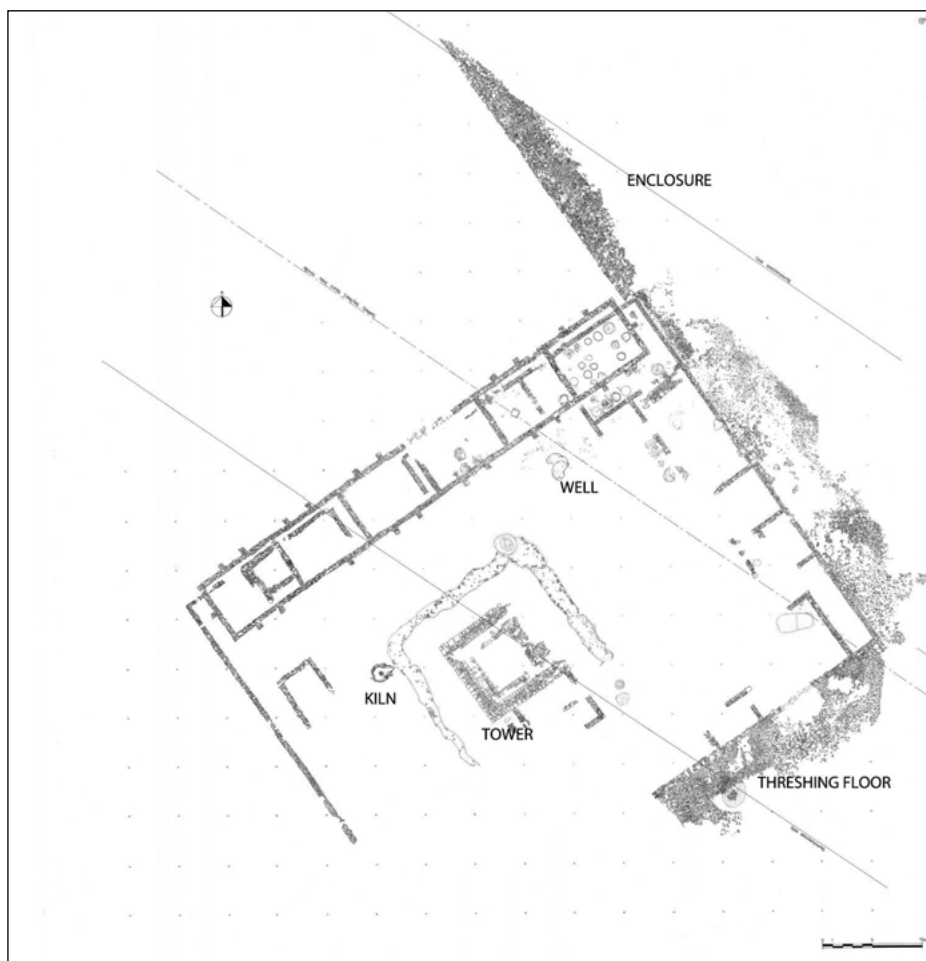


Figure 12.3: Site plan of Platania (courtesy of E. Poulaki).

excavated to a length of thirty-two meters, is an element found in other farmhouses (Lohmann 1992), and at Platania, it could have enclosed fields or animals. The majority of the finds comprised coarse and fine pottery, tiles, amphorae, pithoi, loom and lead weights, iron implements, small mortars, bronze fittings, and iron spearheads and arrowheads in great quantities (Poulaki 2003). The presence of the kiln suggests that the occupants of the estate made at least some of their pottery locally. The tower could have been used for housing the animals or for storing crops; alternatively, given the location of the site near the corridor connecting Thessaly and Macedonia, it could also have had a defensive character, to observe and react to the movements of groups traveling through or sometimes damaging the landscape.

the northeast part of the building there is a well. It is possible that the entrance was located at the east side of the building, facing a street. The overall plan of the building does not suggest a typical house.

The frequency of finds of Building Δ throughout its destruction layer is impressive: different types of cooking, serving and drinking pottery, very large quantities of transport amphorae, a few large storage vessels, various female and animal figurines, and coins. Aspects of the daily life of the inhabitants are suggested by finds such as fishing hooks, net weights, needles, loom weights and arrowheads. The well was originally used during the early Hellenistic period for water, but was later transformed into a rubbish pit, containing part of the debris from the use of the building, such as ash deposits, and large amounts of fine and domestic pottery, consisting of kantharoi, skyphoi and amphorae, lopades, chytres and pinakia. It should be noted that the quantity of material forming the domestic assemblage is very large in comparison with the small size of the building, and thus probably much greater than the needs of a single household. In addition, the predominant types of pottery suggest cooking, serving and drinking, but not much storage; the kantharos, of which more than 100 vessels were found in the assemblage from the well alone, is possibly the predominant pottery type, suggesting extensive drinking (Mpachlas and Siros, forthcoming).

The Archaeobotanical Remains

The aim of sampling for archaeobotanical remains was not only to reveal information about the economic choices and agricultural activities of the period in this specific area of Macedonia, but also to identify the function of the houses and differences between them. At Kompoloi, the great majority of the material consists of grape remains, with the most interesting the thousands of grape seeds (pips) accumulated in the bottom of the large pithoi located mainly in the storage area. The interpretation of the very large quantities of grape required ethnographic and experimental work on grape processing. The results of these studies suggest that it is possible for grape seeds to escape the sieving process during treading, ending up in the fermentation vessel, where they can remain if the product—that is, the wine—is not transferred to a different vessel, a practice which normally involves further sieving (Margaritis and Jones 2006; Margaritis 2006a, forthcoming). The archaeobotanical remains at Kompoloi represent the end product of the grape processing sequence, in this case found in a primary context as wine dregs, suggesting stored wine in pithoi, and preserved due to the destruction by fire in this area of the site. The volumes of the two large pithoi located in the north part of the storage area have been estimated to be approximately 2,200–2,300 liters each. In an attempt to approximate and standardize the volume of various amphorae, a mean value of 21.6 liters for the Mendean type and 25.9 liters for the Rhodian has been suggested (Wallace 2004). Taking these measurements only

as a starting point for analysis, the two large pithoi of the storage area could hold a quantity of wine that equals the capacities of 170–204 amphorae. This quantity does not take into account any of the other pithoi in the storage area, or from the site as a whole, thus suggesting a minimum scale that exceeded domestic production, most likely for commercial use and market distribution.

Elsewhere, grape seeds and raisins were found in the basement of the tower at the east side of the living quarters, as part of a burned destruction layer. The large concentration of grape seeds are again interpreted as the residues of wine, associated with the pithos found on the floor of the cellar. Wine was also stored in the living quarters in smaller quantities, perhaps indicating wine of a different quality, not aimed at the market but the owner's personal supply. Large quantities of grape seeds found in the courtyard of the living quarters were also interpreted as wine dregs, either as the residues of the final sieving of the wine or wine dregs after the cleaning of the storage vessels. In either case, these residues would subsequently have been used as fuel in the hearths of the house, and then disposed in the courtyard as refuse in a secondary deposit (Margaritis 2006). South of the house, where ditches most likely represent a part of a garden or a vineyard (Poulaki 2003), large quantities of charred grape seeds were also retrieved together with charcoal and fragments of pottery, indicating that the grape assemblage was first used as fuel within the house, then disposed of in the ditches, possibly as fertilizer, together with other domestic refuse, which is a common practice today (Margaritis, pers. obs.).

The large quantities of grape remains at Kompoloi represent the latter stages of wine production, suggesting that the bulk processing of the grapes was undertaken outside of the house and only the very last sieving would have taken place within the estate. An alternative suggestion could be that the grapes were processed in the house (the grapes were most likely treaded in portable vats, as no permanent installations for wine production have been found), but most of the residue from the processing was disposed of outside the house, or at least they were not burned and therefore not preserved. Other than grape, crop processing is not evident at Kompoloi. The other plants found at the site include bread wheat, lentils and fig seeds found around a hearth located in the courtyard of the living quarters, suggesting some food preparation outside of the rooms of the house.

The site of Douvari similarly revealed plant remains consisting solely of hundreds of grape remains found in association with a pithos, suggesting the storage of wine in the farmhouse. However in this case the level of production was on a much lower scale than that evident at Kompoloi (Margaritis, forthcoming).

At Platania the situation is different. A diverse assemblage of plants is present, including barley and bread/macaroni wheat in the majority of the samples—macaroni and bread wheat are distinguished by rachis internodes and not grains (Zohary and Hopf 2000)—while spelt, emmer, einkorn, oat and rye occur in very few samples. Lentils and bitter vetch constituted the only pulses present; olives, grapes, figs, dandelion and cornelian cherry are the fruit in the sample, and nuts such as hazelnut,

walnut and almond are also present (Margaritis 2006; forthcoming). Glume wheats, oat and rye are present in insignificant amounts, which could indicate that they were not cultivated but were brought into the assemblage as weeds occurring with the other crops—that is, entering the site as by-products of crop processing, as noted at other sites (Mangafa 1995, 213; Kroll 2000, 64). The majority of the samples from Platania come from contexts such as floors or destruction layers, as refuse from various household activities, such as processing and cooking. They are found in every room of the house and it is difficult to know if they represent primary, secondary or even tertiary depositions, but they still provide a good picture of the use of space in the building.

Crop processing is evident from the area of the threshing floor, just to the south of the house, where rachis internodes (chaff) of macaroni wheat are present. The chaff of free threshing cereals, as opposed to glume wheats, is likely to be removed at an early stage in the crop processing sequence, as by-products of winnowing and coarse sieving (Jones 1987, 322). Hence at Platania the chaff did not reach the house itself, only the area around it; if the external spaces had not been excavated and the threshing floor had not been located, the archaeobotanical assemblage of this area would have been permanently lost. The assemblage also consists of macaroni wheat and barley grains probably indicating concurrent threshing and further processing of these two cereals, although it could represent the by-products of different processing activities. Their charring could be explained by regular burning of the threshing floor area for cleaning purposes.

The presence of seeds belonging to the wild or weed category suggests that crop processing may have been carried out piecemeal within the house. Depending on the physical characteristics of the wild or weed species and their categorization, it is possible to recreate the crop processing sequence, and determine which product or by-product these weeds are associated with. Most of the species found at Platania, weeds of arable land (Hanf 1983) following the categories provided by Jones (1987), are indicative of a variety of stages, such as coarse and fine sieving, and hand-sorting. However, it is also possible that certain species such as medic and lupine were gathered intentionally for animal fodder. Medic species are quality fodder and when growing wild, are indicative of relatively mineral rich soil (Bremness 1994, 188). Lupine can be used as green manure, forage plants or for fodder, mainly for cattle (Gladstones 1974, 123). It may also be included in the human diet, since it is rich in protein, after dangerous water-soluble and bitter alkaloids have been removed by boiling or roasting (Huxley and Taylor 1977, 93; Zohary and Hopf 2000, 123). Lupines in some parts of Greece have been grown as a crop, such as the area of Mani, primarily as Lenten food (Clark Forbes 1976, 134). The small number of lupines found at Platania however does not suggest their use for human consumption. The seeds of Christ's thorn most likely did not enter the site as a by-product of crop processing, being a hedge plant (Huxley and Taylor 1977, 102). It may have been used for fuel or for other purposes, such as the building of enclosures (Foxhall 1998, 37), but the consumption of its dried fruits cannot be excluded.

Crop processing is also evident in the east wing of the house, as suggested by the thousands of grape seeds found on the floor. As with Kompoloi and Douvari, this assemblage can similarly be interpreted as by-products of wine production. In this case, without evidence of wine storage, they represent residues of fuel or residues kept as fertilizer or fodder, which were burned accidentally (Margaritis, forthcoming).

Fig is represented both by seeds and also parts of whole fruits, which would have been eaten fresh during the summer months, and may be used also as fodder (Jameson, Runnels, and Van Andel 1994, 276; Valamoti 2004, 117), as an ingredient in bread making as suggested for Pharaonic Egypt (Murray 2000, 623), or otherwise as component for cooking other foods. At Platania the whole fruits most likely represent dried figs, which could have been achieved through sun- or oven-drying and stored for later use throughout the rest of the year. Moreover, once dried, they were an easily transportable commodity for trade (Zohary 1995, 367). The presence of dried figs suggests a further treatment and processing of the fruits that could have been taken place at the site.

The greatest evidence of crop processing, however, comes from the olive remains found in very large quantities on the floors, in pits located in the courtyard, as well as in the area of the kiln. According to Margaritis and Jones (2008a, 2008b) the olive remains, especially those found in great quantities disposed in pits in the courtyard, represent the residues of olive oil production. Such residues and other by-products of fruit consumption are more likely to be used as fuel on a regular basis, which may explain the abundance of olive remains in the estate. The use of olive as fuel is mirrored in the samples deriving from the kiln, as olive pits are very good for both cooking and firing as they burn slowly while producing a small amount of smoke but plenty of charcoal. They are also used in interior spaces as well (Brun 2003), evident in the olive remains used as fuel at the various rooms at of the house at Platania (see Foxhall 2007).

Turning finally to *Krania*, the plant remains discussed here originate in the burned destruction layer that sealed the floor fill of Building Δ, and from the refuse deposit from the well. The information provides a snapshot at the end of the lifespan of the building. Soil samples for archaeobotanical study were collected from the hearths, between the broken domestic vessels on the floor and from areas with large amounts of visible organic debris such as charcoal, fish and animal bones, and marine shells. The samples taken from the well were associated with domestic debris: they were taken with twenty-centimeter intervals, so a reliable representation of the material originating from the totality of the pit was possible. A range of species was recorded on the floor and in the well. Cereals present were barley, bread/macaroni wheat, and limited quantities of glume wheats (einkorn, emmer and spelt). Lentil, bitter vetch, pea, grass pea and celtic bean represent pulses, hazelnut, walnut and almond the nuts, while olive, grape, fig and danewort (dwarf elder) represent the fruit group. Oat and rye were present in small amounts, and a single flax seed was also identified; very large quantities of sesame and pine add

to the assemblage while wild/weed species were also represented by a variety of species (Margaritis 2014).

The samples from the floor of the building reflect discarded material from various activities, such as processing, food preparation and possibly consumption. As these samples reflect secondary depositions and they are the result of disposal, they do not leave much ground for further interpretation of the different crops and their possible status and uses. It remains uncertain, for instance, whether barley and bread/macaroni wheat were grown together as a maslin, in the same field, or merely were discarded at the same place. Evidence of storage in a small scale is also apparent in the building with concentrations of pine and sesame in the northwest room. The sesame seeds indicate the use of a non-staple crop, which could have been cultivated in the area. Pine could have grown in the area around Krania, a suitable environment near the coast; but it could equally have been brought from further afield. Both species are connected with cooking and the flavoring of food, and their presence might indicate culinary preferences beyond the everyday. According to written sources and epigraphic evidence, sesame cakes were connected with specific social events such as weddings; offered as prizes to people who stayed up all night at symposia; or used in rites to Artemis, Dionysus, Demeter and Kore (Brumfield 1997, 155–156).

The remains from Building Δ represent raw materials intended for use as ingredients in meals, with fruits and nuts for individual consumption or also for use as parts of cooked meals. The cereals and the pulses could have been processed and cooked in basic and simple ways, such as roasting or boiling, and they may have been consumed in this form. Few samples from hearths included fragmented cereals and pulses may correspond to processed food.

Many samples contain seeds from the wild or weed category and the majority of these taxa derive from the samples originating from the well. The majority can be found on arable land and need to be removed from cereals before consumption as food. According to Jones's (1987) classification, the taxa are a by-product indicative of a fine-sieving and/or hand-sorting; in other words, the plants that would have been removed from the crops by fine-sieving and hand-sorting. Other organic remains that have been found in abundance in the building and have been studied are the fish bones (Mylona 2008). The fish assemblage is very large and the taxa identified in the building represent almost the entire range of aquatic habitats, except perhaps the lacustrine. Not only were the rich coastal waters of the Thermaic Gulf exploited, but also brackish, lagoonal areas, which correspond perhaps to the estuaries of the Pineios River. The Pineios River proper was also the source of some of the fish consumed on this site (Mylona 2008).

Discussion

The sites presented in this paper represent different economic units situated in the landscape of south Macedonia, engaged in differing agricultural regimes: Kompoloi and Platania are estates involved in large-scale production, while Douvari was engaged in farming on a much smaller scale. At Krania, building Δ is used for the preparation and consumption of food.

The large quantities of grape remains found at Kompoloi, in combination with significant storage facilities, show engagement in large-scale viticulture, focusing on a particular resource, making it a center of a specialized wine production industry, aiming at a regional market and probably beyond. In contrast, Platania was producing for subsistence while also engaged in the cultivation of olives, but evidently not specializing in production as a cash crop because of the unpredictability of return. Some of the olive oil could have been channeled to local markets, exchanged between different country houses, or even sold to nearby urban centers. Platania shows intensification of production, involving the possible cultivation of cereals and pulses in rotation, where the crops are closely supervised and tended with weeding and manuring, frequent tillage or continuous cultivation of the same fields (Halstead 1994). Intensive farming regimes can also be inferred if some land plots were actually located within the enclosure and hence very close to the site. The estates' agricultural choices and their engagement in intensive farming regimes results in a specific management organization, which composed the *oikonomia* of each site.

Land use and the intensity of agricultural activity have been connected in an ongoing debate over the permanent or seasonal nature of occupation of farmhouses in the Classical and Hellenistic periods. Long-term rural occupation has been correlated with labor-intensive land use, but the permanent character and use of agricultural buildings has been questioned (Osborne 1985). Osborne (1992, 22) found support in epigraphic documents, mainly land leases from Attica, and other areas, where it is shown that substantial buildings in the countryside were not generally primarily residential. Lohmann (1992), on the other hand, approached the issue through a regional survey of classical Attica. He argued that in many rural structures, the oil mills and presses, threshing floors, pithoi and other agricultural implements, point to a permanent rather than a seasonal use of farm buildings. Halstead countered that these buildings, especially the smaller ones, could have been used as storage space for agricultural equipment and produce such as fodder, and that these uses were a sufficiently compelling reason for building substantial structures (see comments following Lohmann 1992). Drawing on epigraphic evidence demonstrating that there were residential buildings with towers, Osborne (1992) raised the subject of residency in building complexes which consist of towers (or include such structures), wondering if they were more likely to be residential than other rural buildings. Later, however, Osborne (1996) admitted that the epigraphic evidence is inconclusive, acknowledging that survey data clearly indicate the intensity of land use—he noted such structures

were rarely of sufficient quality or quantity to allow for a distinction between residential and non-residential buildings or between permanent or temporary residencies.

The excavated houses of Vari and Dema were interpreted as isolated country houses associated with agriculture and beekeeping, used seasonally by small farming families. Survey finds including elements such as pithoi, basins, and roof tiles, domestic and fine ware have been regarded as indicative of permanent residence. These considerations support the assumption that Kompoloi represents residency and permanent occupation. In addition to the evidence from the material components, permanent occupation is supported by the specialization in the cultivation of the vine and the production of wine. Both the productivity of the vine and the quality of the produced crop—leaving aside ecological and climatic variables—are very much determined and influenced by the way the plant is maintained (Margaritis and Jones 2008c). Since there is no immediate return that would reward the decision and efforts in planting vines, they have been regarded as crops typical of a stable community; once the commitment to them is made, the awareness of the lead-time and the energy invested constitute a deterrent to moving to a new location. Furthermore, prior to vintage, which was the peak of activity of the year, the grower has to engage in a series of activities, necessary to maintain maximum productivity in the following year, such as digging, thinning the shoots and leaves, and cutting the weak branches. Maximizing the harvest and the product depended on intensive work in the fields at critical periods of the year, and so permanent occupation of the estate would have been essential.

It is important to consider what is meant by permanent, year-round occupation. Does it entail only the occupation of the estate by its owner? It is of little significance in this context to identify who was actually living in the estate, and it is difficult to identify who was using the estate as a residence, unless substantial archaeological data point in one particular direction. Pecirka (1973) has suggested that in the Chersonesos *chora*, where farmhouses located close to each other were engaged in viticulture, landowners could live in a nearby village and easily go out to the fields, but they could also reside in the country. He also suggested that the lower the status of the tenant and the workers, the more possible or likely they were to reside on the farm. It is possible that the owner of Kompoloi would come and go, and participate only on specific occasions, such as the harvest, the opening of the wine jars, or when making arrangements for the sale of the product. Various scenarios are possible: the owner and family could have run the land themselves and actually lived on the estates; they could have appointed a manager; or they could have leased it in its entirety or in parcels, as has been suggested for Classical contexts elsewhere in Greece (Carlsen 2002, 117). Issues such as the size of the property, convenience of management, and the distance between farmland and residence (not only in cases of multiple, scattered landholdings) could be critical variables. Nevertheless, these three systems of management are not mutually exclusive, as in some instances the landowner might only cultivate a part of the estate and lease the rest to one or several tenant farmers.

In other cases, it is possible that the wealthy landowner lived on one farm or in the town while slaves, tenants or wage laborers worked the more distant fields. The variability of terminology in the ancient literary sources, such as *oikonomos* and *prooikos* (Carlsen 2002, 118), suggest that different people had specific roles in the management of the houses and the land.

Vine cultivation was also practiced to some degree at Douvari. The recovered wine dregs could be the residues of wine stored for the consumption of the occupants of the farmhouse, who may have produced exclusively for their own consumption along with growing various subsistence crops. It is clear that here vine cultivation and wine production would have been on a much smaller scale than at Kompoloi. Considering that not all the data are currently available, some tentative suggestions for the role of Douvari I and II and their possible connection with Kompoloi will be presented, which may need re-evaluation once the different categories of archaeological remains have been fully published. The archaeological remains of Douvari I (pithoi, roof tiles, quantities of coarse and fine pottery and coins) could be indicative of permanent habitation, representing agricultural buildings and a residence for people farming the land. Douvari I could also have belonged to the agricultural territory of Kompoloi. If the building were used as an agricultural base for the labor force of Kompoloi in order to be closer to the fields, it may have been a residence for the periods of the harvest and vintage. This would have been a practical arrangement if the vintage took place in the fields, as the lack of installations for processing grapes at Kompoloi may indicate. Similar patterns could be identified at the Mesogeia farms in Attica, for instance, which were closely aligned to through-roads, and which have been interpreted as the residences not of owners but the people working there (Steinhauer 2003).

If Douvari was an autonomous farmhouse and not connected with Kompoloi, it may have been the seasonal base of a family resident in the city (either Leivithra or Krania), possibly engaged in arable farming and viticulture, which could have involved selling wine or must to Kompoloi. Kompoloi had the resources, labor and facilities available for the fermentation, storage and distribution of wine together with the availability of a market and a wider network of people engaged in viticulture from cultivation to the stage of trade. It would therefore have been able to collect the vintage from the other farmhouses of the area and act as a distribution center. It is possible that many may have found it difficult to compete with the larger estate of Kompoloi, whose owner clearly had moved toward extensification and cash cropping. A similar scenario has been proposed for poorer farmhouses of the Roman period in the Peloponnesus, where they may have lacked the proper installations for processing. Wealthier households in these cases would appropriate the processing function, either in exchange for money or, more likely, for part of the product.

Considering Platania's size, the storage facilities and the threshing floor, the wealth of domestic equipment, and the overall character of the site, there are strong indications for its permanent occupation. Olive cultivation is indicative of long-term engagement through permanent olive groves, although engagement in oleoculture

alone does not prove permanent residency at the farmhouse. That said, it would not have been possible to maintain production, increase quantity, or to improve quality if the trees were not attended to and cultivated properly. In addition, a number of other year-round agricultural activities would have required the attention of the inhabitants, such as the cultivation of cereals, pulses and possibly vines. Thus, Platania must have maintained sufficient capital, labor and resources for the engagement in (non-specialized) olive cultivation, along with other agricultural activities. The occupants of this farmhouse were most likely involved in the production of surplus, in commercial activities, and in the exchange of products with other farmhouses in the region. In olive-producing areas it was common practice until the 1970s for the farmer who received help during the olive harvest or borrowed crushing and pressing equipment from another farmer to return the favor with payments in oil. Given that such installations have not yet been found at Platania, the possibility exists that some of the oil surplus could have been given to a neighbor who hired out labor or equipment (Margaritis, pers. obs.). As with Kompoloi, it is not possible to detect whether the people living at Platania were the owner and family, tenants, slaves or a combination. The data suggest, however, that the farmhouse would have been occupied on a permanent basis rather than as a seasonal base for agricultural activities. If the owner had residency in the city (at Krania or Phila or elsewhere) and was unable to remain at Platania for prolonged periods, there would certainly have been a proxy (as discussed for Kompoloi) to administer and supervise cultivation, production, processing and trade.

Another important component of the agricultural economy and organization of the estates would have been domesticated animals. It is therefore unfortunate that from a site as large as Kompoloi only a very limited number of animal bones were retrieved, and these come mainly from the well located south of the house complex. Archaeozoological data could potentially contribute to the debate regarding mixed farming or specialized pastoralism, as was the case with the Hellenistic site of Halos (Reinders and Prummel 1998). At Kompoloi, mixed farming was feasible, and would have benefited from the keeping of livestock. The inhabitants would need animals for transportation to the fields and, if treading of the grapes was actually located there, to bring the must back to the site. They could also keep animals for other agricultural tasks, secondary products, and for meat consumption. When grazed around the farm, the animals would have been kept away from the vineyards so as to avoid serious damage to the crops. On the other hand, they could also have grazed on the prunings of the vines, especially during the seasons of intensive pruning and trimming. Residues of wine making would also have been an additional source of food for the animals, not only immediately after processing but also later, since the residues could be stored easily for fodder or fuel (Foxhall 1998, 39). It has been argued specifically that small-scale animal husbandry, even on comparatively large farms, depended almost entirely on agricultural residues, not only for house goats and sheep, but also for traction animals (Foxhall 1998). In return, the animals would have provided valuable manure for the vines and possibly other crops. The combination of livestock

and extensive cultivation of vines has been suggested for estates found at Delos and Rheneia (Kent 1948, 299).

In contrast to Kompoloi, archaeozoological remains are abundant at Platania. They are mainly found in the living quarters and in the well in the courtyard. The animal remains have not yet been analyzed, but their study is expected to provide additional information about farming practices and animal husbandry at the site. The fact that assumptions about animal husbandry until now have been built on data mostly from urban centers such as Halos (Reinders and Prummel 1998) and Kassope (Boessneck 1986), points to the importance of the Platania assemblage. The possibility of animal husbandry could add new perspectives on the economy of the site. Animals would have been crucial for threshing, plowing, transportation and consumption during the agricultural year, while integration of crop and livestock husbandry would in turn make manure more freely available and so reinforce the viability of intensive farming (Halstead 1987, 83). Another way of intensifying land use is through “intensive” herding, by letting sheep or goats graze on olive groves or in fallow fields (Jameson, Runnels, and Van Andel 1994, 281); if the inter-cultivation of fodder legumes were a possibility, animals would also have been able to graze these. Animals could also have fed on post-harvest grain stubble and agricultural residues such as vine and olive prunings and trimmings, wine and olive oil press cakes. If cereal and pulse rotation was practiced at Platania, it would have resulted in the availability of fodder in the lowlands during summer. This would in turn have constrained the seasonal movement of the animals, required to consume weeds and produce useful manure (Halstead 1981, 328).

The situation is different away from the *chora* and in the urban center of Krania. On the basis of the small size of Building Δ, its atypical architecture, the large pottery assemblage of the building, together with the very large quantity of plant remains, it is suggested that it represents a *kapeleio*, or tavern. In current research, contexts within a building with very rich pottery assemblages and visible organic remains, such as animal bones and shells, have been connected with wealthy houses, large scale non-domestic dining, such as the case of House 7 at Halieis (Ault 1994), or with ritual dining such as at the Sanctuary of Demeter and Kore at Corinth (Bookidis et al. 1999). *Kapeleia* were public bars in villages and cities that offered wine and food. The places and the food were modest, and frequented by ordinary people, while private parties and the symposium remained largely aristocratic. By the fifth century there was an extensive drinking culture supported by shops, local markets and foreign trade. Such establishments have been identified in the archaeological record, and Shear (1975) has interpreted an assemblage of fish, shells, animal bones, cooking pots, and wine amphorae as the refuse of an eating establishment in Classical Athens. Similar residues of urban “taverns” have been identified at Delos (Chatzidakis 1997), Mytilene (Ruschillo 1993) and Corinth (Bookidis et al. 1999) on the basis of the pottery and the animal bones, though these were visible during the excavation and not the result of systematic recovery.

It is important to consider the location of the sites in the wider context of the area. Kompoloi may not have ventured into specialized wine production had Krania, the harbor city, not created the positive conditions for expansion and profit presented by the possibility of commercial activities on a local and regional scale. In this context, the area of southern Pieria during the late fourth to the early third centuries B.C. is occupied by cities, large estates and small farmhouses, suggesting intensive cultivation of the land and strong economic relationships between the sites in the area. The countryside, however, did not produce only for subsistence; Kompoloi is engaged in wine production, a risky but highly profitable product, aiming beyond self-sufficiency at exchange networks beyond the limits of Pieria.

This paper has demonstrated the importance of archaeobotanical studies in classical archaeology, presenting a test case for the identification of agricultural regimes, economic interlinkages and use of space in different household contexts, while demonstrating the necessity of thorough recovery techniques. Plant remains have progressively become part of more focused studies from excavations of the Classical period. Urban centers such as at Azoria (Haggis et al. 2011), the Athenian Agora (Margaritis 2006b), and Corinth (Margaritis 2013), and rural sites such as Foti-Vroskopos on Kea (Karnava, Kolia, and Margaritis 2011) have started to reveal economic and social histories through the analysis of their organic remains. In addition, new excavations of classical urban centers will focus their interpretation on the archaeobotanical remains such as the sites of Sikyon, Itanos, Oropos and Olynthus (Margaritis, under study). This new information, although to date far from sufficient for a coherent analysis of the nature of ancient Greek agriculture, will certainly add important data to current theoretical debates, and fundamentally improve our understanding of the ancient economy.

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Athanasia Kyriakou and Alexandros Tourtas

13 Detecting Patterns through Context Analysis: A Case Study of Deposits from the Sanctuary of Eukleia at Aegae (Vergina)

Abstract: The society of the ancient kingdom of Macedonia remains in obscurity relative to the vivid personas of Philip II and Alexander the Great, derived from historical sources and selected excavations. Analysis of archaeological assemblages through a contextual approach can provide a framework to begin understanding and interpreting various aspects of the human behavior and ways of life in Hellenistic Macedonia. This paper focuses on one of Macedonia's most important cities and its first capital, Aegae, or modern Vergina. The aim of this paper is to discuss assemblages and material patterns from the city that demonstrate aspects of human behavior over several centuries. The engagement with issues addressed by these assemblages results in insights into the way social groups reacted to destruction as a form of loss and furthermore into the role and treatment of the past in periods of crisis.

Introduction

The archaeological site of Vergina is identified by most scholars with the first capital of the kingdom of Macedonia, Aegae (Andronicos 1984; Hammond 1997; Hatzopoulos 1996; Saatsoglou-Paliadeli 1996a). It comprises the fortified city and the necropolis (fig. 13.1) (Drougou 2003; Drougou and Saatsoglou-Paliadeli 2006). Our knowledge of the urban space from the fourth century B.C. to the early imperial period is best known from extant remains in the western part, where public life is inscribed in the landscape: the palace is situated on the highest plateau in the foothills of the Pieria Mountains (Saatsoglou-Paliadeli 2001), the theatre lies just below the palace to its north (Drougou 2006), and further down on the slope, a sanctuary and a complex of public buildings are located most probably in direct proximity to the agora of the city (Saatsoglou-Paliadeli 1996b). Other public constructions have been revealed in the area of the northwestern gate of the fortification wall (Kottaridi 1993, 2004). The rest of the city in the east remains in fact a *terra incognita*, apart from a sanctuary dedicated to the Mother of the Gods (Drougou 1996), a building of uncertain character (Tsigarida and Haddad 1993), and a recently discovered area with workshops (Drougou 2009).

The necropolis, on the other hand, represents an intensively excavated area, at least in comparison with the urban area: the Early Iron Age cemetery with approximately 300 low tumuli (Andronicos 1969); the Macedonian-type tombs, of which the most renowned are accessible in the Museum of the Royal Tombs (Andronicos 1984; Kottaridi 1997, 2013); and cist tombs and pit graves corresponding to several periods (Bräuning and Kilian-Dirlmeier 2013; Kottaridi 1996, 2002). Despite the focus

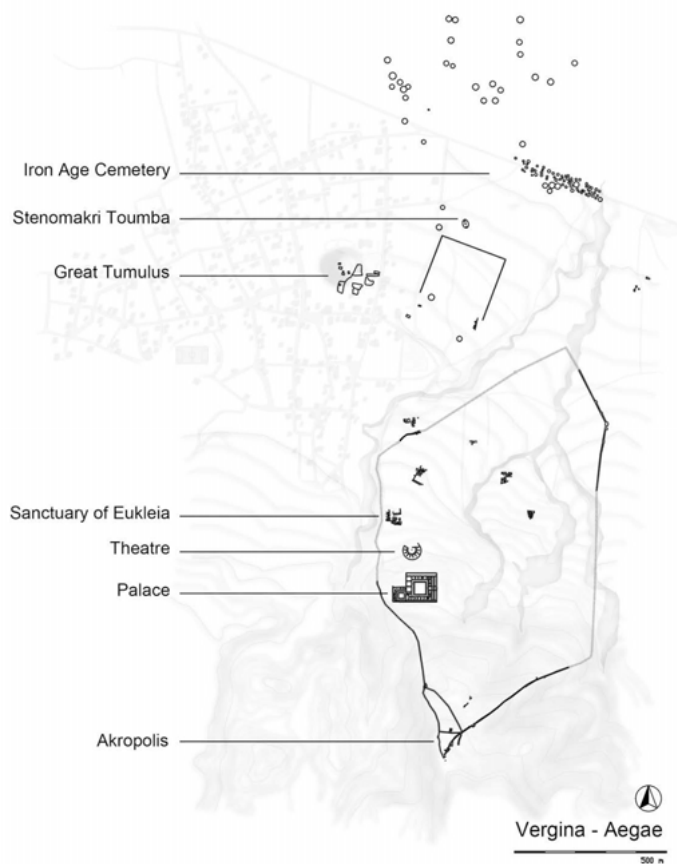


Figure 13.1: Plan of the archaeological site of Vergina/Aegae (drawing A. Tourtas).

of research on the royal graves and the debates over the identity of their occupants over the last thirty years (Hatzopoulos 2008), the material evidence produced through excavations in both the city and the cemetery may offer insights into social structure, and agency, concepts and beliefs of a community which contributed significantly to the formation of the Hellenistic world, its subsequent response to the Roman conquest and its final decline in the early imperial period.

The Pits in the *Temenos* of the Sanctuary of Eukleia

One of the most significant parts of the ancient city is the area of the sanctuary of Eukleia, located about eighty meters north of the theater, along the western fortification wall (Saatsoglou-Paliadeli 1996b). Research in the area has brought to light architectural remains organized along different terraces facilitating the construction of buildings on the slope of the mountain. A well-defined terrace comprises the main area of the sacred space (fig. 13.2): a fourth-century B.C. Doric prostyle temple (Temple II) oriented east-west with a stoa annex to the south, and an altar to its east along with three marble podia that once supported bases of *anathemata*. To this complex a smaller temple (Temple I) on a different axis (north-south) was added in the third century B.C., and further changes took place in the first half of the second century B.C. A large-scale destruction detected around the mid-second century B.C. is most probably connected with the Roman conquest. It remains a question whether or not the sacred character of the terrace was strictly retained into the early Roman period (first century B.C.–first century A.D.), since it is not explicitly attested through the findings. Taking into account the evidence from all of the excavated sectors, the first century is evidently marked as the end of this part of the city, as it does for the rest of the urban space. Two inscriptions that mention Eurydice, the mother of Philip II, as the dedicator, and Eukleia, the personified deity of glory and good repute (often worshipped in the agoras of Greek cities), attest to the identity of the sanctuary (Saatsoglou-Paliadeli 1993, p. 53).

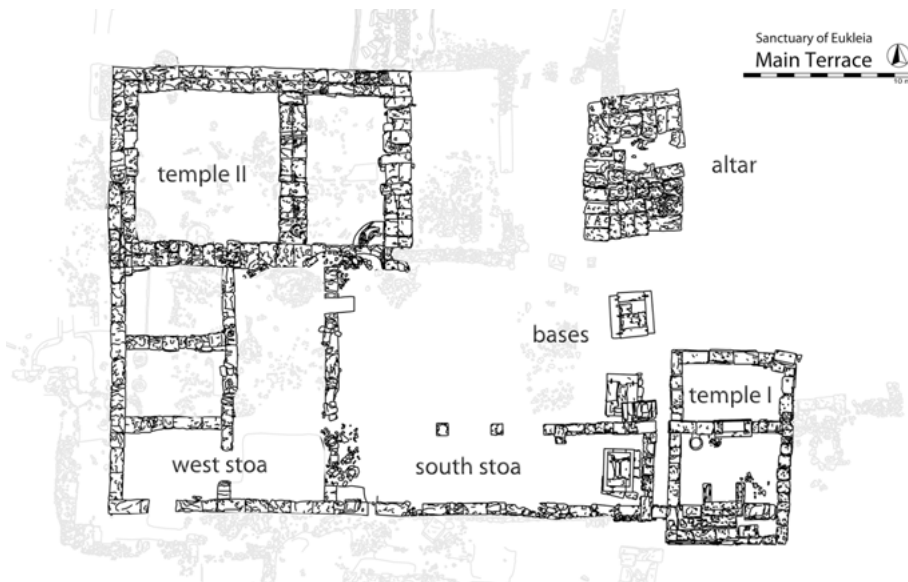


Figure 13.2: The main terrace of the sanctuary of Eukleia (drawing A. Tourtas, after N. Haddad in Saatsoglou-Paliadeli 1993, p. 53).

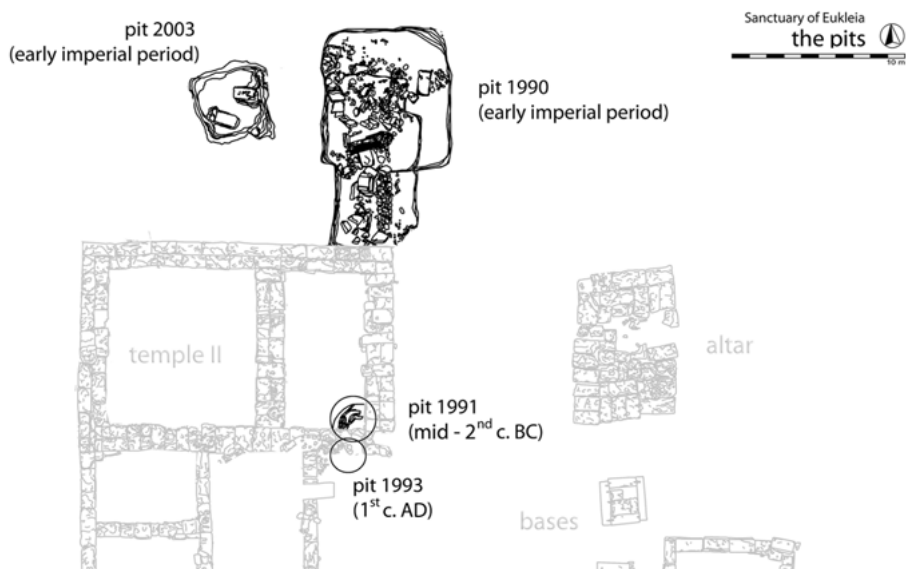


Figure 13.3: The pits around Temple II (drawing A. Tourtas, after N. Haddad in Saatsoglou-Paliadeli 1993, p. 53).

soglou-Paliadeli 1987, 1996b, 2000), and its immediate connection to the agora, an important dimension of sacred space preferred by the royalty.

Although the results of the archaeological research at the site are not yet fully published, preliminary reports and synthetic studies have attempted to shed light on crucial elements of the archaeological record (Saatsoglou-Paliadeli 1987, 2000; Kyriakou, forthcoming a; Kyriakou and Tourtas 2013). Unfortunately, the destruction of the buildings commonly disturbs foundation levels, constituting a major disadvantage in our effort to understand patterns of reconstruction, architectural phases, precise chronology and the character of the cult. Four pits, however, found inside and around Temple II, provide abundant and valuable material evidence for the evaluation of the site (fig. 13.3). The earliest pit was recovered in the southeastern corner of the antechamber of the fourth-century temple (fig. 13.3: pit 1991). It contained, along with some statuary and architectural fragments, a colossal marble snake of which the lower part is preserved; ceramic and numismatic evidence suggests a dating around the mid-second century B.C. The second is a large pit outside the northeastern corner of the temple, where a large marble female statue, a marble inscribed statue base, two marble heads and large quantities of pottery were found (fig. 13.3: pit 1990). Just one and a half meters to its west, a square ditch was discovered containing only two poros blocks and potsherds (fig. 13.3: pit 2003). Pottery and coins indicate a date in the first century B.C.–first century A.D. for both pits to the north of Temple II. Finally, a circu-

lar pit was recovered just outside the southeastern corner of the temple that contained only unidentifiable architectural material (fig. 13.3: pit 1993). Owing to a bronze coin, we are in the position to maintain a dating in the last decades of the first century A.D.

Methodology

The contextual analysis of the four pits and their assemblages—constituting well-dated and closed deposits—has permitted us to explore depositional practices and their relevance to the history of the sanctuary. Since in all cases the construction of the pits involved primary depositional processes—indeed the intentional burying of objects—a methodology was required to allow us to examine and visualize stages, properties, and spatial integration as components of the interaction between agents and material evidence. A fundamental question to be answered is whether the ditches can be considered deposits or waste pits. In the former case elements of some kind of ritual or symbolic activity should be identifiable, whereas in the latter we would simply recognize the expected attitude towards objects belonging to a sanctuary that were discarded by being buried in the temenos—a well-documented practice. To these ends we will address:

- (1) the importance of the place. By this we mean the importance of the location of interment, as determined by finds or features of the physical and constructed landscape; this would involve the investigation of an intentionally established connection of the pit or the buried objects to the place;
- (2) definition in space. By this we mean the spatial location and distributional pattern of the pits and buried objects;
- (3) emplacement. By this we mean the conditions of the creation of the pits and depositional processes, and patterns and characterization of the creation of the context;
- (4) evaluation of the contents;
- (5) inherent or attributed meaning or value of buried objects;
- (6) potential ritual activity connected to the interment; and
- (7) relationship to other building phases.

Summary Outline and Analysis of the Pits

The Pit inside Temple II (Mid-second century B.C.)

General characteristics. The pit, excavated in 1991, had been opened in the southeastern corner of the antechamber of Temple II and its rim formed a quadrant (radius



Figure 13.4: The pit with the marble snake (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

1.3 meters) (fig. 13.4). It contained a colossal half-preserved marble snake, statues and architectural fragments, pottery in rather limited quantity and a bronze coin (Saatsoglou-Paliadeli 1991; Kyriakou and Tourtas 2013).

Importance of the place. Temple II is undoubtedly a monument of major importance for the sanctuary. Although excavation has not expanded to the east beyond the altar—in fact neither the boundary in that area nor the existence of other constructions are known—it is evident that the temple with the stoa, altar and monumental podia of pedestals form an integrated architectural unit, of which the main building is the Doric temple. What is more, the finely worked blocks of Temple II, especially of the northern retaining wall, the monumentality of the constructions, and the remarkable use of marble for the podia, along with sparse mid-fourth century B.C. ceramic evidence from the construction ditches, are all analogous to the impressive construction of the palace and the theater, suggesting the implementation of a fourth-century B.C. architectural program comprising the configuration of this western public part of the city (Saatsoglou-Paliadeli 2001, 202). Within this framework it is essential to refer to a find of crucial importance: a fragmentary second-century B.C. inscription from the antechamber of Temple II, that in all probability mentions the name of queen Laodice, who offered a dedication “to the god” (Saatsoglou-Paliadeli 2000, 389–392). Laodice was the daughter of Seleucus IV Philopator and Laodice IV, and the wife of Perseus, the last king of Macedonia. Her name indicates royal presence in the sanctu-

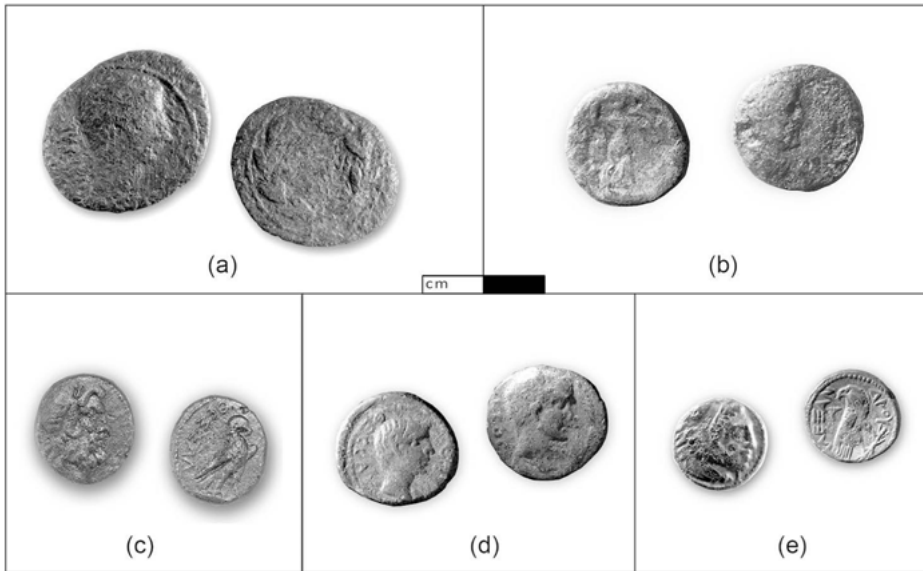


Figure 13.5: Bronze coins from the pits: a) Augustan period (pit of 1990); b) Augustan period (pit of 2003/2011); c) coin issued by Philip V (pit of 1991); d) coin issued by Domitian (pit of 1993); e) coin issued by Alexander III (pit of 1990) (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

ary in the years before the Roman conquest and augments the significance of Temple II and the buried snake.

Excavation inside the corner of the temple and exposing the foundation of its walls convey the intention for a symbolic interment of the snake and the rest of the fragments, although the latter are mainly unidentifiable fragments.

Definition in space. The rim of the pit was defined by fieldstones.

Emplacement. The creation of the pit would not have been difficult, but carrying and depositing the marble snake would have demanded the efforts of a small group of people. The snake was lowered carefully into the pit, with the pointed end of the tail at the bottom. Breakages are connected to its destruction and were seemingly not caused during transport or burying. The rest of the fragments filled the ditch without damaging the snake.

Ritual activity. There were no specific indications or correlates of ritual.

Contents. The finds recovered around the snake sculpture do not present a meaningful pattern. Unidentifiable marble fragments, evidently building debris, imply large-scale destruction. The fact that the upper part of the snake—especially the head—is missing probably means that an extensive and aggressive mutilation took place that turned the head to marble chips. The only find providing a terminus post quem is a bronze coin bearing the head of Zeus and Athena, minted during the reign

of Philip V (229–179 B.C.), after 221 B.C. (fig. 13.5c) (SNG Alpha 2000, pl. 49:1071 and pl. 50:1072–1074; Donas 2008, 39–40).

Meaning of the buried objects. It could be argued that the pit was created for the marble snake, which constitutes a unique piece of statuary; it is not part of a sculptural complex and seems to represent a chthonian god—most likely Zeus Meilichios—who was figured in the form of a serpent in votive reliefs and was worshipped in the agoras of ancient Greek cities (Saatsoglou-Paliadeli 2000, 389–392). It is extremely tempting to perceive the sculpture as the cult statue of Zeus Meilichios standing in the cella of the temple.

Relationship to other building phases. The temple must have suffered a first destruction in the years of the Roman conquest, just before the mid-second century B.C.—in 168 B.C., the last Macedonian king, Perseus, was defeated by the Roman general Lucius Aemilius Paullus at Pydna. The debris, though, must have been cleaned in order to prepare the site for a new building phase. During this refurbishment, the pit was opened in the southeastern corner of the antechamber in order to accommodate large marble fragments and the snake sculptural fragment. As part of a new building phase, a wall of fieldstones was constructed on the same axis over the south wall of the fourth-century Temple II that partially covered the pit, implying an immediate action right after the creation of the pit. Nevertheless, it seems that this phase did not last long. A destruction layer in the antechamber and immediately to the east of the temple comprising two coins of Philip V and Perseus (Donas 2008, 38–39) indicates that the final act of the Roman conquest of Macedonia (possibly after the revolt by Andriscus in 148 B.C.) must have been the cause of the final destruction of the building.

The Pit outside the Northeastern Corner of the Temple II (first century B.C.–first century A.D.)

General characteristics. The pit is two meters deep and rather irregularly shaped (its maximum length is 8.6 meters and its maximum width is 5.2 meters); it was discovered in 1990, immediately north of Temple II (figs. 13.6, 13.7). It contained statues, large quantities of pottery and some architectural blocks and fieldstones (Saatsoglou-Paliadeli 1987; Saatsoglou-Paliadeli 2011a, 195–200; 2011b, 276–280; Kyriakou and Tourtas 2013).

Importance of the place. Again, as with the pit within the pronaos, the Doric temple is the point of reference. During the excavation, a large part of the exterior surface of the foundation of the north wall, which also functioned as a retaining wall, was exposed.

Definition in space. The pit has an unusual shape and one would assume that it was adapted to fit some sort of configuration of the area around the temple. No architectural remains have come to light in that northern area, but we cannot exclude the very likely existence of trees or plants.



Figure 13.6: The “statuary pit” (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

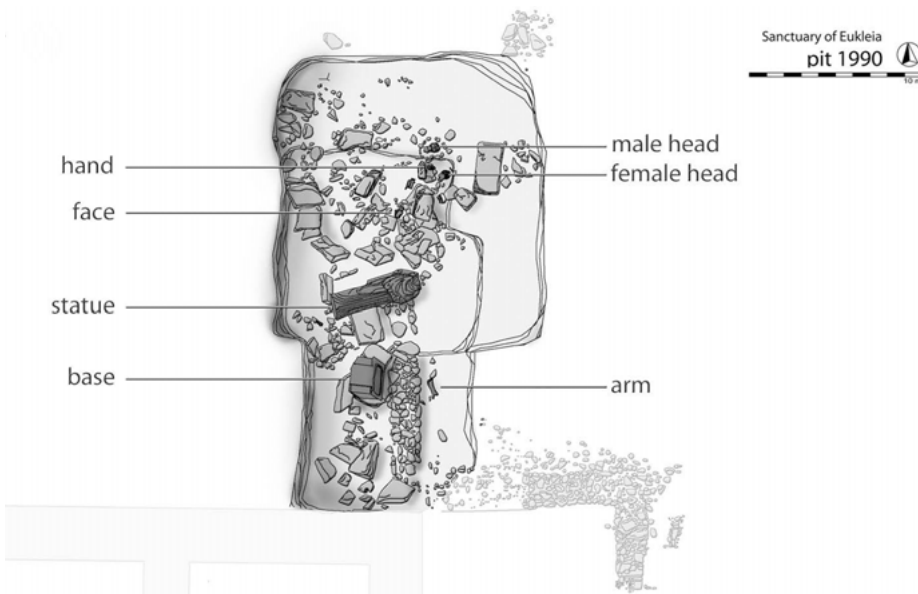


Figure 13.7: The “statuary pit” (drawing A. Tourtas, after N. Haddad in Saatsoglou-Paliadeli 1990, p. 24).



Figure 13.8: Male marble head encircled by stones (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).



Figure 13.9: Cooking pot and statue neck fragment found underneath the female statue (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

Well-cut poros blocks, found at the edges and the bottom of the pit, roughly define its boundaries. The head of the female statue was buried in the center of the pit, and two marble heads of young figures, a male and a female, were recovered to the north of the large female statue, encircled with small stones (figs. 13.7, 13.8).

Emplacement. The creation of a large “statuary pit” suggests planning and organization. Furthermore, the treatment of the female statue indicates special treatment. First, the weight of the statue should be taken into account. Weighing one ton, it was apparently displaced, transferred from its original position within the sanctuary and carefully relocated to the ditch. As in the case of the snake, there are no signs of destruction or negligence during transfer or burying. Its preservation is almost perfect, apart from the arms, the head and neck, losses that are likely the result of the original destruction. Of course, these parts are most susceptible to breakage.

Ritual activity. A cooking pot, intentionally broken at half the height of the belly, was found on the ground underneath the female statue (fig. 13.9). It seems as if the pot was meant to receive some kind of libation and was then exposed to fire, or contained ashes derived from a ritual performed elsewhere. In any case, the cookpot suggests components of ritual activity. The neck of the statue was subsequently placed near the pot and finally the female statue was carefully taken down inside the ditch, covering both the pot and the neck. The statue was placed on its back and covered with fieldstones (fig. 13.10). Broken bases of large clay vases spotted upside down around the statue may indicate libations in the immediate vicinity of the buried statue. The face of the statue, with minimal damage, was placed in the pit, facing upwards. The two other heads, intact, were also transferred from another spot and were laid in the pit facedown. All three were carefully encircled with fieldstones. In this context it is worth mentioning a bronze coin that belongs to a rare issue of Alexander the Great (fig. 13.5e) (Price 1991, 160; Liampi 1998, 247; SNG Alpha 2000, pl. XXXII: 705 and pl. XXXIII: 706–7; Donas 2008, 74). Additionally, stones, poros blocks, marble fragments, pottery and large quantities of charcoal and ash debris, products of a large scale destruction that had taken place somewhere in the area, were thrown inside.

Content. In this case the context of the pit contributes to the interpretation of the statuary. The impressive number of potsherds belongs to storage, cooking, serving and consuming vessels (fig. 13.11). They suggest communal drinking and dining activities—conducted in the sanctuary—and almost all are dated between the second century B.C. and the early first century A.D. (Kyriakou, forthcoming a). Out of the six coins found in the ditch, one, mentioned above, belongs to Alexander the Great; one was issued by Antigonos Gonatas (277/6–239 B.C.); one is an autonomous issue of Thessaloniki in 187–168 B.C.; two are dated to the Augustan period, and one is unidentifiable. The best-preserved Augustan coin should probably be dated to 27 B.C. or after 14 B.C. (fig. 13.5a) (Mattingly 1976, 117–118, 731–736; Donas 2008, 73).

Meaning of the buried objects. The female statue bears characteristics of a majestic motherly figure dressed in peplos with a himation over the head (Saatsoglou-Paliadeli 1987). The inscription on the marble base found next to it and probably con-



Figure 13.10: The female statue within the “statuary pit” (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

nected to it alludes to her possible identity as Eukleia, the personified deity of bravery and good repute. The face, though, and front part of the neck, had been scrapped off to match another face and neck, the ones discovered near and underneath the statue respectively (fig. 13.12). The realistic rendering of the facial features allows the connection to a middle-aged mortal and specifically to the dedicator mentioned in the inscription, Eurydice, who was a daughter of Sirras and mother of Philip II, a power-

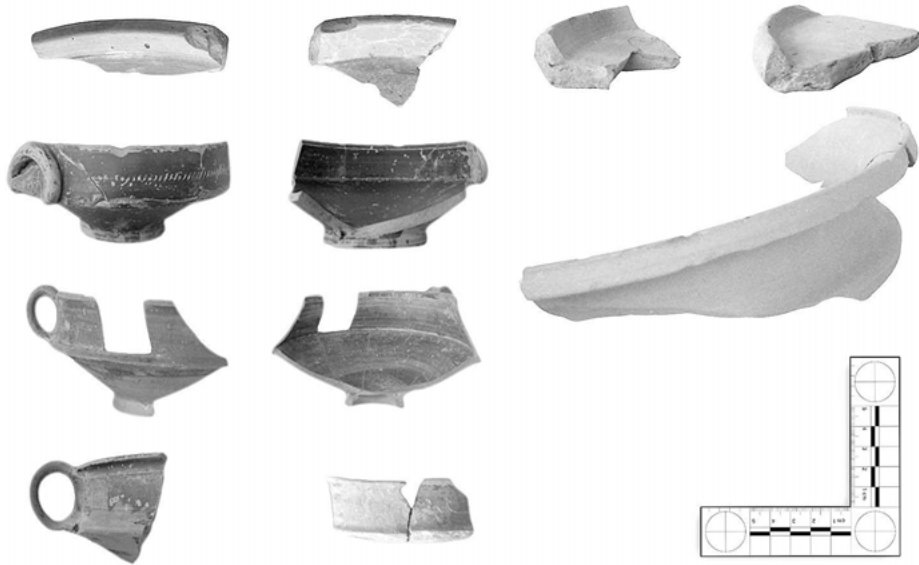


Figure 13.11: Pottery from the “statuary pit” (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

ful queen who managed to bring Philip II to the throne of Macedonia after a period of upheaval and instability (Saatsoglou-Paliadeli 2000, 393–401; Dillon 2010, 78–79, 120). The chronology of the change of the face is not easy to place, though it may have come from a statue depicting the queen mother herself. In this case the final combination could be the outcome of a merging of two different statues.

The sculptures deposited in the large ditch resonate with royal dedications and social activity connected to them, perhaps even centuries after the dominance of the Temenid royal house. The two statues from which solely the heads have survived might be connected to the female statue, since they are dated in the same period and are possibly works of the same artist. They may have represented deities as well.

What was their function just before destruction? It is certain that the female statue and the young figures were highly respected as deduced from the activities suggesting special attention, and ritualized if not ritual placement. Indeed the storage, cooking, serving and consumption vessels imply communal meals in the same context as the statues. It is highly possible that they were used in the same space of the sanctuary, most likely in the stoa next to the temple, and suffered the same destruction.

The period of disuse seems to be the most interesting, since it coincides with the declining period of the city of Aegae. A special role should be most probably attributed to the statues and especially to the female royal dedication in a period of crisis, when identities were negotiated.



Figure 13.12: The face and neck fragments of the female statue (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

Relation to other building phases. The pit was opened in archaeological strata with no architectural remains at all and only scanty small finds. Like the pit with the snake, the large “statuary pit” was covered by a wall constructed with rubble masonry that belonged to a new building phase in the area of the sanctuary.

The Pit to the North of Temple II (first century B.C.–first century A.D.)

General characteristics. This pit, which was excavated in 2003 and 2011, is a three by three meter square, two meters deep, and contained two poros blocks, numerous potsherds, a few coins as well as ash and charcoal (fig. 13.13) (Kyriakou and Tourtas 2013).

Importance of the place. It is situated north of Temple II, about one and a half meters to the west of the large “statuary pit” and was created in the same stratigraphy.

Definition in space. There wasn’t any detectable definition of the pit.

Emplacement. The content, products of destruction, was thrown in the pit without any detectable care.

Ritual activity. No ritual activity was recognized.

Content. The pottery displays the same characteristics as in the case of the large “statuary pit”. It would not be surprising to find out that some sherds belong together. Moreover, two identical marble hands with closed fingers were discovered in both pits. It is quite certain that the two pits were created at the same time. The numismatic evidence corroborates this chronology: five coins are dated between 229–100 B.C. and the last in date bears the head of Zeus and eagle, and was minted in Thessaloniki possibly in the years 42–34 B.C. (fig. 13.5b) (SNG ANS 1987, pl. XXX: 807; Touratsoglou 1987, 57, pl. 8: 28).

Meaning of the buried objects. No special value or meaning can be attributed to the buried objects.

Relation to other building phases. The pit was not related to other prior or posterior building phases.

The Pit outside the Southeastern Corner of the Temple (Late first century A.D.)

General characteristics. This pit, excavated in 1993, with a diameter of approximately two meters, is situated outside the southeastern corner of the temple and contained unidentifiable fragments of building material, a few potsherds and a coin (Saatsoglou-Paliadeli 1993; Kyriakou and Tourtas 2013).

Importance of the place of interment. The intentional proximity to the temple is evident.

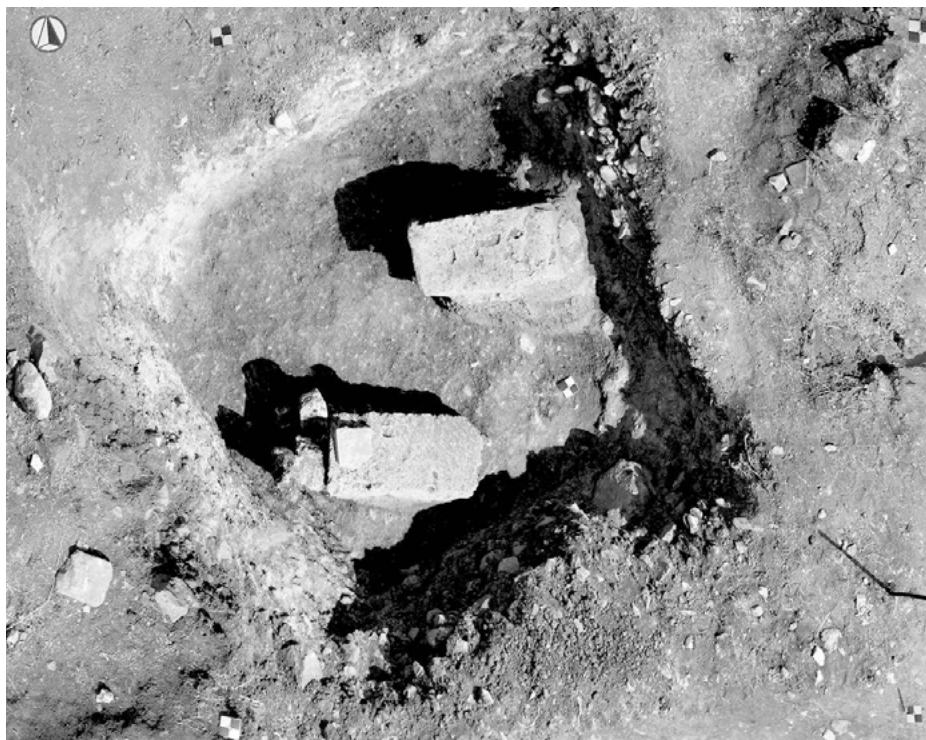


Figure 13.13: The pit excavated in 2003/2011 (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

Definition in space. There is no detectable intentional shape or architectural definition of the pit.

Emplacement. The contents, evidently products of destruction debris, were thrown in the pit without discernable special or intentional treatment.

Ritual activity. No ritual activity was recognized.

Contents. Fragments of thick mortar pieces, possibly from a floor revetment, and poros blocks fragments appear to come from a building. A bronze coin from Thessaloniki depicting Augustus is probably dated between 81 and 96 A.D., during the reign of Emperor Domitian, who may have ordered an issue reminiscent of the famous types of Augustus in the years 27–14 B.C. (fig. 13.5d) (Touratsoglou 1988, 42–43).

Meaning of the buried objects. No special value or meaning can be attributed to the buried objects. On the contrary, one has the impression of waste or post-destruction discard.

Relation to other building phases. According to excavation, there must have been some limited building activity in the area above the pit. Unfortunately the remains were poorly preserved and are beyond the scope of the present paper.

Depositional (Burial) Practices and the Definition of “Deposit Pits”

The four pits present differences in the treatment of the remains of destruction in a sanctuary. In all cases, we suggest a deliberate and programmatic activity of clearing the space of the sanctuary, and placing remains in ditches created for that purpose. All pits presuppose the work of a group of people taking initiative or accomplishing assigned tasks in a public area that was also a sacred place.

Two pits, however—the large “statuary pit” to the north of Temple II, and the one with the snake within the building—show distinct characteristics connected to ritualized treatment, ritual activity, or symbolic performance. They are also contexts that contained large-scale and impressive sculpture. For those two we could characterize them as “deposit pits,” though we also observe that the others bear evidence of intentional deposition connected to the Temple II. Moreover, the square pit to the north of the temple was created at the same time as the large one and most likely accommodated residue of the same destruction. Despite the lack of evidence of ritual treatment or performance, the context of the two waste pits, though comprising unstructured deposits, resonate with symbolic gestures, or at least in general convey attitudes of care and respect.

Having outlined the results of study so far, we should further elaborate on the way people reacted to destruction within the sanctuary. It was a general rule in sanctuaries to treat items belonging to the sanctuary carefully, but in our case it is striking that structured burial practices were uniformly applied (Donderer 1991–1992, 193–196; Jacobs 2010). The destruction was perceived as equal to death and the artifacts that were respected or ritually meaningful had to be buried, so a pit was opened, as in the case of burials. The statues were put into the pit, libations were made and rituals with fire were performed. The buried sculptures were articulated in some way—even covered or defined with fieldstones. Items that once accompanied the buried objects followed them into the pits as well. Exactly in the same way grave offerings were evidently placed in the tomb, or the remnants of the funeral pyre were amassed and deposited on top of the tomb. An occupational stratum on top of the pits suggests immediate use of the area, which in a way retains a sacred character because of the location of the pit just below it.

As in the case of burials, the depositional act or event is an episode in the life of the actors, and thus was determined by and had a bearing on the events before and after the interment. Social relationships, perceptions of the sacred, collective identity, enhancement of memory and coherence are embedded and intertwined in the action of deposition, exactly as in the cases of funerary and post funerary activities. The imprint of or the impact on the society or a particular social group are tightly interconnected (Parker Pearson 1993).

Widening the Contextual Framework: Analogous Cases in the Necropolis

Having suggested a structure in a process that follows to a large extent mortuary practices, it remains to address questions on the possible existence of similar actions in the cemetery. One context, worthy of comparison is a big marble krater buried inside a funerary monument. The Stenomakri Toumba is an oblong burial mound in the Tumuli Cemetery, covering three family graves, and containing a funerary monument (10.80 by 2.70 meters) on its eastern side that commemorated the dead and evidently augmented the family's social status (figs. 13.14, 13.16) (Kyriakou 2008; Kyriakou, forthcoming b). The tombs are dated to the mid-fourth century B.C. and were plundered most probably in the first quarter of the third century B.C. by Pyrrhus' Gallic garrison. Part of the monument must have escaped total destruction and was possibly still visible in the mid-second century B.C. It is clear that whatever was still standing and visible was destroyed when the monument's foundation was excavated by looters. The interment of the marble vase, the sole survivor of the adornment, and a pyre inside the monument, followed the destruction and constitute an instance of social agency aiming to show respect for or ritually to re-intern the desecrated dead. The same model of analysis used for the pits in the sanctuary may be applied for the interment of the vase.

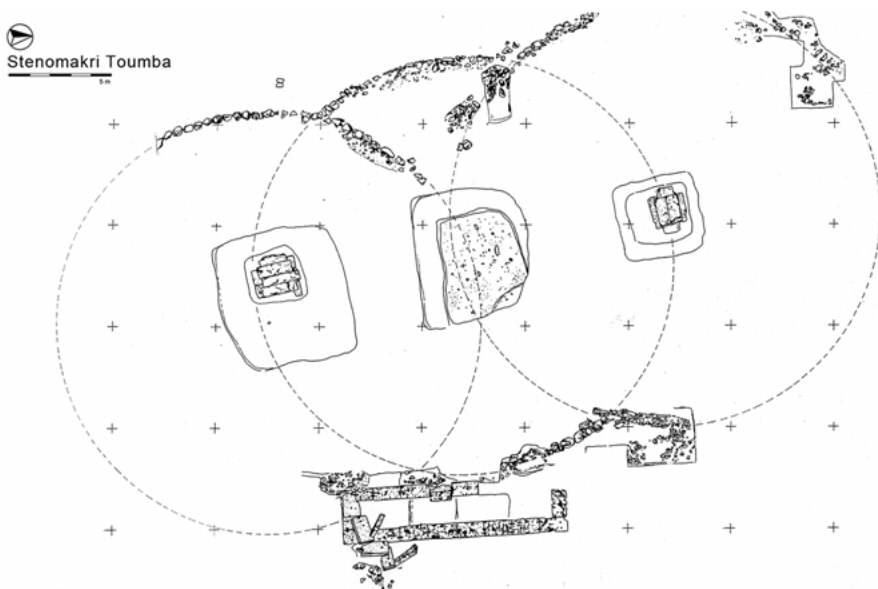


Figure 13.14: The Stenomakri Toumba (drawing A. Tourtas, after N. Hatzidakis in Kyriakou 2008, p. 31).



Figure 13.15: The marble krater inside the funerary monument (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

General characteristics. There was no constructed pit. The fill inside the monument must have had already been dug out and the foundation had been exposed. The one meter high marble krater was buried in the southeastern corner of the krepidoma and foundation, almost parallel to the south wall (fig. 13.15).

Importance of the place. The significant and symbolic character of the funerary monument is explicit, as well as the close relationship of the vessel to the monument (fig. 13.16).

Definition of space. The upper part of the monument is no longer extant, although the foundation along with the northern part of the krepidoma is preserved. This activity of dismantling the monument, most probably by the last invaders, is evident in the displacement of blocks of the krepidoma. One of them was found in an upright



Figure 13.16: The funerary monument (courtesy of Aristotle University of Thessaloniki, Vergina excavation archive).

position, leaning against the eastern wall, almost parallel with the northern wall (figs. 13.15, 13.16). The vessel was revealed in the narrow space between the southern wall and that removed block.

Emplacement. The krater had already suffered damage when it was buried. Its rim and base are missing, and it is partially broken in several areas, though the overall poor preservation of its surface is the result of erosion caused by taphonomic conditions. It is interesting, however, that it was carefully placed between the southern wall of the monument and the large displaced block immediately to its north.

Ritual activity. In the center of the monument, about two meters to the north of the vessel, remains of a pyre were visible. The imprint on the ground had a diameter of approximately one meter, and a small jug, a drinking vessel, and a coin, dated to the mid-second century B.C., were found inside.

Contents. There were no other finds apart from the vessels and coin.

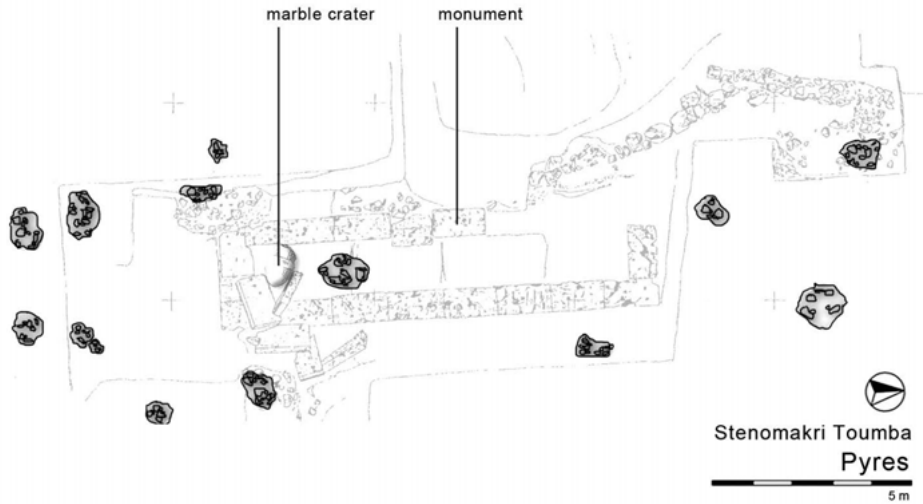


Figure 13.17: Pyres around the funerary monument (drawing A. Tourtas, after N. Hatzidakis in Kyriakou 2008, p. 43).

Meaning of the buried objects. The marble volute krater must be the only surviving element of the external decoration of the monument. It is interesting that there are very few Classical examples of this shape produced in marble (from Pydna, cf. Descamps-Lequime 2011, 529; from Taranto, cf. Lippolis 1987, 147; Steingraber 2000, 104)—they are more commonly constructed of terracotta or metal. Volute kraters were connected to Dionysus and the underworld and were depicted in grave reliefs representing funerary meals; additionally, they were very often used as funerary receptacles (Barr-Sharrar 2008; Kyriakou, forthcoming c).

Relationship to other phases of use. The interment of the vessel and the pyre constitute the last episodes of human activity in the tumulus.

When describing the Stenomakri Toumba it is of critical importance to contextualize the pyre inside the monument. Fourteen different pyres have been discovered on the tumulus and around the monument, constituting a significant component of the life history of the tumulus (fig. 13.17). They were all recovered on the eastern side, which makes perfect sense considering that this area must have been related to a road crossing the cemetery. Unfortunately, the majority of the pyres contained no finds; only the differentiation in the color of the soil and the ash and burned material attested to their existence. Since a precise dating cannot be made, a rough relative chronology is reconstructed through the stratigraphy of the tumulus itself. The pyres correspond to the ground or walking level of the monument may logically be ascribed to the rituals taking place right after the initial burials in the fourth century B.C. The pyres on the tumulus, sealing the various intrusions into the mound—caused

by Gaulic plundering—and rebuilding episodes, should probably be dated to the third century B.C. The last pyre in this chain (second century B.C.) is the one in the center of the destroyed monument. The ritual was performed after the foundation of the monument had been refilled with earth.

Pattern Behavior in Context: The Archaeological Site

The pits in the sanctuary of Eukleia and the deposit inside the funerary monument of the Stenomakri Toumba indicate certain comparable patterns of behavior and structured deposition: careful displacement and treatment of artifacts connected to the gods or the dead after destruction. Two features emerge as basic aspects: the definition of space by creating boundaries or using existing materials; and the close relationship to constructions that played a significant role in the diachronic formation of religious and ritual landscapes. In some cases the rituals involved burning or burned sacrifices. In general we are in the position to identify a mentality of piety and deliberate and ritualized activity—communal human agency that most likely relates to behavioral structures enhancing collective identity and solidarity.

It is worth investigating whether this pattern of behavior can be contextualized within the framework of the archaeological site as a whole, examining whether or not other locations in the urban sphere provide relevant patterns or evidence of similar social/ritual activities. In this regard it is perhaps relevant to mention another important sanctuary recovered in the notional center of the city, the Metroon (Drougou 1996, 2011). The popular and chthonian cult of the Mother of the Gods was housed in a spacious sanctuary with rooms developed around a central courtyard and sacred areas evidently used for libations, with the first constructions dating to the fourth century B.C. A great fire completely destroyed the sanctuary in the mid-second century B.C., as we would expect, but here, there was apparently no revival of the cult. Despite the fact that it was a highly revered place, and a critical component of civic life, as indicated by the assemblages of cult objects, dedications, and installations, there was no evidence for activities overlying the destruction debris.

In marked contrast, the necropolis of Aegae provides substantial evidence for the beliefs and actions of the inhabitants of the Macedonian capital along with the attention afforded it by rulers, possibly as part of a political decision making process. The burial ground of the old capital constituted a sacred space for the Macedonians, and especially for the Temenid royal family: tradition had it that when Perdikkas, the first Temenid king, was dying, “he showed to his son Argaeus where his bones and those of his ancestors were to be buried, and he prophesied that the kingdom would remain in his family as long as the remains of his posterity were buried there” (Hammond and Griffith 1979, 12–13). The extended necropolis, apart from its nucleus of Early Iron Age date, has produced ordinary, elite, and truly elaborate burials dating from the Archaic

to the Hellenistic periods, and corresponding to the conditions of a community where ruling power legitimized through lineage ties, and was bound with the societal structure. On the basis of the archaeological record and literary evidence, it is argued that this necropolis suffered a devastating blow, which marked its history. In the year 275/4 B.C. the Gallic garrison of King Pyrrhus of Epirus plundered the graves, seized valuable grave goods, and in some cases discarded the bones of the dead. This great misfortune was followed by an impressive subsequent project, the construction of the Great Tumulus (Andronicos 1984; Saatsgolou-Paliadeli 1984). King Antigonos Gonatas, when he gained control, presumably ordered the building of a Great Tumulus that would cover the unlooted royal tombs along with their destroyed monuments such as the “heroon.” Considerable amounts of different kinds of earthworks, and a low construction with fieldstones in the center, secured the consistency, insulation and hydraulics of the huge mound, which measured 110 meters in diameter and thirteen meters in height. Hundreds of pieces of broken grave stelae bearing inscriptions with names of ordinary citizens were gathered, transferred, placed or thrown into the fill of the tumulus. The magnitude of construction suggests a royal edict, and indicates centralized and state-sponsored organization of the work; large-scale mobilization of labor; social action motivated by respect for ancestral land; symbolic performance and collective consciousness; and most likely the enhancement of the king’s public identity in an early phase of his reign. Finally, the Stenomakri Toumba was in a sense recreated after the looters’ hole in one of the cist graves was closed with fieldstones, a process similar to the intrusions into the “Tomb of Persephone” in the Great Tumulus. In general, the practice of tidying things up in eminent burial clusters seems to recur within the necropolis (Kottaridi 2000, 530).

Patterned Behavior in Historical Context: The Roman Period in Macedonia

In all cases the creation of the pits in the sanctuary of Eukleia points to periods of crisis. The historical context of the first pit in the sanctuary and the deposit of the marble krater in the funerary monument is a turning point in the history of Macedonia, the Roman conquest. The devastating defeat at Pydna in 168 B.C. fueled an irreversible process of changes in political and societal structures. In the beginning, the region of Macedonia was divided into four republics, corresponding to the former administrative *merides*. According to scholarship, the abolition of a Greek state was an unprecedented Roman act (Eckstein 2010, 245), with the generals and high officials of state being deported to Italy. Nevertheless, things would have gone rather smoothly for Macedonia—Roman forces apparently withdrew from Greece in 167 B.C., and there was little Roman intervention during the next two decades—had it not been for Andriscus, a pretender to the throne of Macedonia, allegedly son of the last king,

Perseus. Andriscus defeated the Roman praetor of Macedonia in 149 B.C. and took the royal name Philip VI. In the end, he was defeated in the area of Pydna in 148 B.C. and Macedonia became a Roman province. From then on Macedonia held a rather peripheral role during the civil wars of Rome until stabilization under Augustus and the *pax romana* of the first two centuries A.D. (Vanderpool 2010). Unfortunately literary evidence on ancient Aegae during this period is in fact virtually nonexistent. Therefore, the interpretation of the archaeological record emerges as a primary source of information on events and mentalities of that period.

Concluding Comments

The pits in the sanctuary of Eukleia and the buried marble vessel in Stenomakri Toumba as closed assemblages, serve as conceptual time capsules condensing a compelling array of material evidence that might indicate social and cultural processes as well as serve as archaeological correlates of historical events. It is tempting to explore the implications of the interrelationships between objects in these contexts, and it would certainly be productive to explore the patterns of social behavior evident throughout the different episodes they represent.

The pit sheltering the colossal snake and the interment of the marble krater mark the end of a period in which the kingdom imprinted on the city plan monumental civic, religious and funerary architecture, as well as spectacular works of builders, painters, sculptors and goldsmiths who constructed a material landscape as a reflection of contemporary societal structure. The archaeological record indicates that the city must have been heavily damaged by the Roman invasion; however, a part of the population must have survived and selected and curated revered items lying among the destruction debris. In the case of the krater, the deposition is the last action in a long-term pattern of use of the burial mound. Abiding by long-standing practice—identical to the reaction to the vandalisms of the Gallic garrison almost a century earlier—and repeating a tradition of remembering, honoring or restoring order between the living and the dead at *Stenomakri Toumba*, the actors carefully interred the damaged krater and performed the ritual inside the foundation of the monument.

In contrast, the case of the “snake pit” demonstrates the refurbishment and continued use of the sanctuary with the rebuilding of the Doric temple. A rough wall was constructed directly over the pit, extending the initial south wall of the temple to the east. It could be maintained that this phase lasted only a few years, since a destruction layer, dated to the mid-second century B.C., covered the antechamber.

Although destruction layers of that period bear evidence to a large-scale destruction throughout the city, and evidence from the necropolis shows that the majority of burials do not continue past the mid-second century B.C., human activity in selected areas did continue. Inside the tholos of the palace, rearrangements and

renovations suggest a phase of reuse (Saatsoglou-Paliadeli 2001, 203–204). Part of the sanctuary of Eukleia was also reused, exploiting the walls of older constructions. The nucleus of this new spatial layout seems to have been the two stoas (fig. 13.2), the fourth-century B.C. stoa once annexed to Temple II, and the south stoa, which had a base of a dedication bearing the same inscription as the one found in the “statuary pit” (ΕΥΡΥΔΙΚΑ ΣΙΠΠΑ ΕΥΚΛΕΙΑΙ). The base belongs to the fourth century B.C. but it was incorporated into the stoa in the first half of the second century B.C., possibly during the reign of Philip V (Saatsoglou-Paliadeli 2000, 392–395), a king of the Antigonid royal house, which possibly indicates a special relationship to the Temenids and their ancestor, Heracles (Eckstein 2010, 230). This part of the main terrace has produced destruction layers of the first century B.C.–first century A.D. The contents of the “statuary pit” reflect activity from the Roman conquest to the first century B.C.–first century A.D. The chronology may support a relationship between the aforementioned transformation of space and the architectural integration of the stoas. This reconstruction would help locate the possible position of the statue of Eukleia/Eurydice—and presumably the other two young figures—in one of the stoas, at least in the final phase of their life history. The pottery associated with communal or ritual dining alludes to uses of open sanctuary space. All the information derived from the pit has a bearing on our knowledge of the Macedonian society in general and the community of the first capital more specifically from the fourth century B.C. to the early imperial period. The multiple dedications of the queen to the goddess—three identical inscriptions have been found so far in the area of Vergina (Saatsoglou-Paliadeli 2000)—as well as the historical significance of the city where the dedications were made, and the promotion of the royal family through public dedications (Schultz 2009) are some of the issues that arise and require further analysis. While these questions should be contextualized in a fourth-century framework, the treatment of the statues after the Roman conquest must also be interwoven into a diachronic narrative of depositional practices and cultural production, with particular reference to phases of discontinuity and crisis.

Who might have been the agents who organized the ritual dinning in connection with the deposition of the statues? Would it be logical to attribute this religious activity to ordinary citizens? Or would it seem more appropriate to ascribe it to emerging elite groups negotiating their identity in a new context, taking advantage of old but still recognizable and vivid symbols of social or political power (Alcock 2002, 36–98)? The inhabitants of the old capital, or a social group of that community now subject to the Roman Empire, perhaps needed a link to a glorious past as a medium of display that allowed them to co-opt an identity of differentiation and distinction, as a form of social cohesion, and a way of forging their solidarity and cultivating the basis of a common past connected to the personalities of Philip II and Alexander the Great or other members of the royal family. Moreover, it seems reasonable to assume a position of status derived from the statues that survived the destructive blow of the mid-second century B.C., which has left its traces in all excavation sectors of Aegae.

It was the destruction at the end of the first century B.C. to the beginning of the first century A.D. that marked the end. There are no known historical events of this period connected to the first capital that could be related to this destruction. Although it could have been an isolated event within this city, the historical context should be evaluated on a regional scale, with excavation data derived from other neighboring sites.

The circular pit to the south of the temple is the last in a sequence of pious deposits in the sanctuary. Notwithstanding the lack of specific patterns suggesting unequivocally ritual activity, it is a structured deposit, consistent with a pattern behavior that entails the selection of a meaningful place and a careful treatment of objects.

In this overview of the deposit pits in the sanctuary of Eukleia the objective was to scrutinize data from archaeological assemblages discovered in the old Macedonian capital, explore their interconnections and connections with historical information. This engagement has resulted in a deeper understanding of the community in question. The treatment and exploitation of the past, following traditional practices, has emerged as a collective reaction or as an apparatus of negotiating identities in periods of crisis.

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Dimitra Mylona

14 From Fish Bones to Fishermen: Views from the Sanctuary of Poseidon at Kalaureia

Abstract: Physical evidence of fishing is used in this paper as the starting point in an investigation of those who lived by the sea and gained their livelihood from it. The investigation in this case study focuses on finds recovered from the sanctuary of Poseidon at Kalaureia on the island of Poros, which provides a diachronic focal point in the study of cult practices and life ways in the Argo-Saronic Gulf. The design and goals of the research at the sanctuary of Poseidon at Kalaureia are built around the collection and analysis of a wide range of bioarchaeological remains. These are considered as primary evidence in the investigation of issues related to the environment and everyday life in the sanctuary. They also form a basis for the interpretative study of issues pertaining to cult practice, as well as the relationship between the sanctuary, nearby communities, and the sea. The presence of fishermen at the sanctuary is demonstrated not only by a large number of fishing tools, but also by masses of marine fauna. The detailed analysis of the latter two categories of finds sheds light on local fishing practices and methods of gathering marine resources, on the nature of fishing grounds exploited and also on the culinary practices adopted within the sanctuary. This paper presents the fishing-related material, and then discusses spatial and temporal context, drawing comparative and interpretative insights from other types of evidence, such as written sources, ethnographic evidence, and contemporary theoretical frameworks in archaeology.

Introduction

Research at the sanctuary of Poseidon at Kalaureia on Poros has revealed remains of cult and non-cult activities that date from the Late Helladic IIIC (ca. 1100 B.C.) to the Roman period (first to second century A.D.). Excavations have aimed at answering specific research questions concerning the everyday life and cult activity that took place in the sanctuary at various stages, and attempt to link these activities to the broader political and social circumstances of the local communities. In this work, the sea is considered to be a central concept because of the geographical location of the sanctuary, the wealth of marine-related finds, and the identity of Poseidon, the main deity worshiped throughout the history of the sanctuary.

The design of work at Kalaureia adopted from the outset various field methods and analytical techniques that are still not mainstream in classical archaeology in Greece. Systematic sampling and water flotation with ensuing analysis of a wide range of bioarchaeological remains were practiced, and these results were integrated and used side by side with the more typical studies of architecture, pottery and other artifacts. These rich and varied data present us with the challenge of integrating a variety of materials and approaches in shaping the broader archaeological narrative.

This paper describes the design and implementation of some of the goals of the Kalaureia Research Programs, especially those related to faunal remains. By way of example, it focuses on the indications of fishing and fishermen, suggested by fishing-related finds, such as fish bones, seashells and fishing implements that have been recovered during the excavations in and near the sanctuary of Poseidon. The paper explores the nature of fishing in the area of Kalaureia, and address questions of the identity of the fishermen, and the relationship between fishing communities and cult practices.

The Sanctuary of Poseidon at Kalaureia

The Sanctuary of Poseidon at Kalaureia (fig. 14.1) is situated at the heart of the island of Poros in the Saronic Gulf. The island is separated from the Peloponnesian coast, the ancient territory of the city of Troizen, by a narrow strait of about 200 meters. Until the end of the nineteenth century it was known from a small number of references in ancient literary sources (Wells, Penttinen, and Billot 2003, 30). These led travelers to visit the surviving ruins from as early as the eighteenth century (Wells, Penttinen, and Billot 2003, 32–33). Their published memoirs illuminate part of the sanctuary's recent history and explain its current state of preservation. The sanctuary of Poseidon at Kalaureia was known as the seat of an amphictyony of seven city-states that was probably founded in the Archaic period (Kelly 1966; Mylonopoulos 2006, 129–36). It was also known as a sanctuary where people sought refuge (Sinn 2003). The most famous among them was Demosthenes, who is said to have committed suicide by poison in front of the temple of Poseidon, as the Macedonians were hunting him in 322 B.C. (Strabo 8.6.14). The Sanctuary of Poseidon at Kalaureia was apparently important on a regional scale; Pausanias, who visited the place in the second century A.D., relates some details on cult practices in the sanctuary (Paus. 2.22.5).

Samuel Wide and Lennart Kjellberg briefly excavated in the sanctuary for the first time in 1894, and its architecture was restudied in the 1930s by Gabriel Welter (Wide and Kjellberg 1895; Welter 1941; Wells, Penttinen, and Billot 2003, 33–35). The area served as a stone quarry for several centuries, and the early travelers witnessed the cutting and transportation of stone from the site, and also the burning of stone in the many limekilns on the island (Wells, Penttinen, and Billot 2003, 32–33). Therefore, very little architecture or sculpture has survived. After the nineteenth century, when the first excavations took place, and up to the 1970s, the site was occupied by a farmstead and the open spaces between standing ancient buildings were cultivated. Excavations were resumed in 1997 by the Swedish Institute at Athens, and have become systematic from 2003 to the present.

So far we have found evidence for cult functions from the Geometric to Late Roman period (Wells, Penttinen, and Billot 2003; Wells et al. 2005; Wells, Penttinen,



Figure 14.1: The sanctuary of Poseidon at Kalaureia, Poros (photo St. Sturnaras and E. Savini).

and Hjohlman 2007; Penttinen et al. 2009; Wells 2009; Pakkanen 2009; Wallensten and Pakkanen 2009; Wells 2011). The materials from the various phases are unevenly represented because of taphonomy—the evolution of the sanctuary—and differential preservation of the various types of remains. To date we can demonstrate that the area was first occupied in the Late Helladic IIIC by a short-lived settlement (Lindblom et al., forthcoming). It was later used again, this time with clear cultic use, in the Geometric period (eighth century B.C.), continuing as a sanctuary from that period. Research so far has shown two major incidents of expansion, one in the Archaic period (seventh to early fifth century B.C.) and the other in the Late Classical (late fourth century B.C.). These expansions are discernable in considerable landscaping, terracing, and in the construction of monumental buildings. It seems that building activity was also taking place in the city of Kalaureia at least from as early as the fifth century B.C.

This complex history of the sanctuary and its environs has left an archaeological site characterized by open expanses, magnificent views towards the Saronic Gulf to the north (Methana, Aegina, Agistri, Attic coast) and a scattering of large buildings, which are, however, mostly preserved as foundations. Imposing monumental architecture, which is so typical of other large sanctuaries, is mostly implied at Kalaureia. Undisturbed closed deposits are not commonplace, while fills and re-worked matrices are common.

The Kalaureia Research Programs

The Swedish Institute at Athens commenced new investigations at the sanctuary of Poseidon at Kalaureia in the late 1990s. After a few years of cleaning and archival work, the first research program was established, under the title *Natural Environment and Everyday Life at the Sanctuary of Poseidon at Kalaureia* (Wells et al. 2005, 127–9). Since 2007, the research has continued in the framework of a second program, called, *The Sea, the City and the God*.

The basic idea around which the first program evolved was that a sanctuary of regional importance, such as the one under study, would have included the activities of various people, both local and perhaps from more distant regions. Those actions included both formal cult-related practices, as well as more mundane everyday activities, which in classical archaeology, are normally examined in notionally domestic and non-cultic contexts. In the research design of the first program, there was a contextual focus aimed at elucidating various behaviors: animal sacrifice, pyres, cooking, feasting, as well as accommodations of people—daily needs of shelter, feeding, and waste disposal—and the material provisioning of these activities. These were seen from the outset as much a part of the life of a Greek sanctuary as the architecture and votives that have captured the interest of classical archaeologists. These ideas are by no means novel in the study of classical antiquity (e.g. Bookidis 1995; Dillon 1997; Jameson 1988). But until recently, the practices and practicalities of daily life in a sanctuary were mostly discussed as reflections of literary and epigraphical sources. Work at the sanctuary of Poseidon has aimed to shift the focus of research to the materiality of such past human activities in the sanctuary. The assumption behind such a choice was that the written record, objects and spaces are all forms of expression of past life ways, and each holds a different potential to illuminate the human experience. We also considered that these different types of data needed to be interpreted, rather than taken at face value.

The second research program, informed by the results of the first phase of work, is revisiting various ideas on ritual and cult practice from new perspectives that have led us into cognitive areas of belief systems (Pakkanen 2008; ed., forthcoming). The interplay between actors and acts in the religious life of the sanctuary was one of the

basic themes explored. The sea—its role and importance in the religious and social life of the worshipers at the sanctuary (and the prehistoric inhabitants of the area)—was another basic theme. These ideas are being explored in tandem with an approach to public archaeology and its various aspects (Hamilakis, Anagnostopoulos, and Ifantidis 2009). That said, as in the first program of fieldwork, the materiality of these aspects of daily life in and around the sanctuary formed the starting point of various directions of research.

The analytical methods employed in the field and during analysis were chosen in accordance with the objectives of the research programs described above. Detailed documentation strategies were judged necessary, and they involved the use of a range of digital techniques, which were designed to facilitate study of context. Furthermore, intensive sampling and water-flotation, as well as a sampling strategy for residue analyses, became integral parts of the research design. A group of researchers was assembled, who would focus on the diverse categories of finds that would result from the implementation of sampling strategies.

Environmental Archaeology in a Classical Excavation

Because both of the Kalaureia research programs focused on the materiality of ritual and daily life in the sanctuary, the emphasis on the analysis of bioarchaeological remains, and on the adoption of a range of science-based approaches was an obvious choice. The environmental program is an integral part of the excavation, while the ensuing analysis of a wide range of different find types is pursued by engaging a number of specialists (Appendix 1). They examine in detail a wide range of materials, including charcoal, carbonized seeds, “bread lumps,” mammal, fish, bird and micro-fauna bones, eggshells, marine mollusks, fibers, and lipids.

In recent years, environmental archaeology, like other aspects of the discipline, has undergone a process of introspection and redefinition of its scope and purpose. Attempts toward a history of environmental archaeology (e.g. Evans 2003) illustrate the multitude of theoretical influences on it, while debate over the identity and purpose of environmental archaeology (Albarella 2001) amply demonstrate the relevance of the discipline to broader developments in archaeology. We were challenged to take a position in this debate, and more importantly, to find ways to bridge the dominant materialist perspective of a classical excavation with current theoretical debates in environmental archaeology, at the same time taking advantage of the already established merits of both environmental archaeology and classics.

We set about to achieve specific goals. One was to use bioarchaeological remains in order to reconstruct the “physical setting” of the sanctuary, in the restricted scale of the precinct itself and more broadly, on the island of Kalaureia and the nearby mainland—engaging ideas of “setting” or “locale” (as in Evan 2003, 29). We do not

perceive this setting, however, as something neutral, but as the result of a process of human engagement—that is, people engage with it socially, economically, or on a symbolic level, are part of it, in a constant negotiation of roles and meanings (Ingold 1999; Hamilakis 2001). In this context, concepts of “physical environment,” “everyday living,” and “cult” in and around the sanctuary are not seen as separate issues, but rather aspects of the same process of experiencing ritual. Our second related goal was to place emphasis on the way gods, humans, plants and animals related to each other at any given time in the sanctuary’s history, changing roles as they moved between different domains, such as the wilderness, the cultivated fields or the pastures, the market, the sacrificial altar or the feasting setting. To do this we applied standard techniques, field methods and analysis protocols for each individual type of bioarchaeological material, but we also attempted to integrate these data into a broader picture of the sanctuary on several levels: paleoenvironmental reconstruction, past economy, consumption, embodiment, and ritual (Mylona et al. 2013).

Analyses based on contextualization offer a framework that permits a dialogue between ideas and interpretations which originate in such different fields as wood charcoal and pottery analysis, archaeobotany, numismatics, and zooarchaeology (see Mylona et al. 2013). Here follows an analysis of the fishing-related finds and a discussion of the fishing domain on Kalaureia in the framework described above.

Evidence for Fishing

The extensive sampling and water flotation of a number of excavated matrices throughout the sanctuary precinct and adjacent Building I produced thousands of fish bones and seashells (fig. 14.2). These were complemented with hand-collected finds of the same kind, along with a large number of fishing-related objects, and chemical traces of lipids and algae.

The fish bones, numbering over 3,500, represent nineteen families and several genera (table 1). They range in size from small, twelve to fifteen centimeter-long boggles and picarels (*Boops boops* and *Centracanthidae*), to large tunas, almost two meters long. They represent fish from several marine habitats, and the distance of the sanctuary from the coast precludes any accidental inclusion of fish bones in the archaeological strata. Therefore we can be reasonably certain that all fish from the sanctuary had been brought there deliberately.

The same is true for the seashells. They are also very variable (table 1), but the bulk of the assemblage comprises the most common edible varieties, such as the limpets (*Patella* sp.), the topshells (*Monodonta* sp.), the ceriths (*Cerithiums* sp.), and two varieties of purple shells (*Muricidae*). Several of the marine mollusks were apparently brought on site for other reasons. Some of them, such as the cone shells, are not

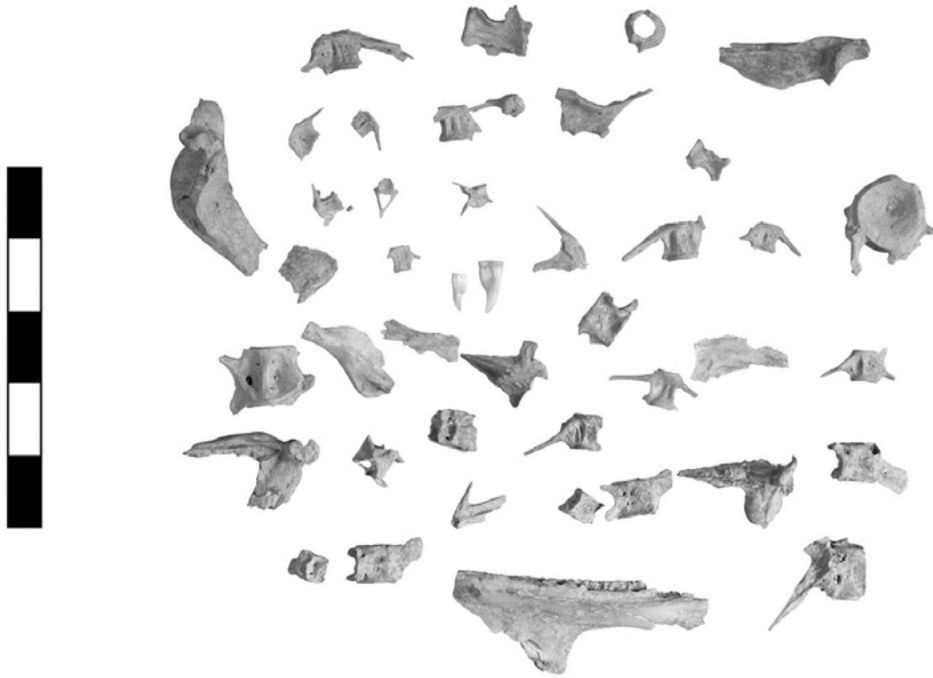


Figure 14.2: A typical sample of fish bones from the sanctuary of Poseidon (photo C. Mauzy).

edible, while others (e.g. *Turitelidae*) are far too small to have been deliberately collected and eaten, and they do not bear any modification traces such as perforations. Tatiana Theodoropoulou has suggested that some shells were brought to the site along with building materials (Klintberg et al., forthcoming; Syrides, forthcoming).

The fishing-related objects from the site include a variety of lead net and line weights in the form of folded lead sheets, lead rings, and also perforated conical weights, bronze fishhooks of various sizes and possibly stone weights. These have been found scattered all over the sanctuary, often in fills, and also in Building I, just outside the sanctuary precinct. None of these finds have been found *in situ* in a situation of primary deposition, although those found within Building I seem to be related to the multiple functions of the building which include commercial activities and food preparation and serving. It seems possible that these finds, especially those found within the sanctuary, represent offerings. Chemical analysis of sherds from cooking pots indicate the possible cooking of foods of marine origin (Klintberg et al., forthcoming), while the analysis of a single soil sample revealed the presence of marine algae, and thus sea water in a feasting context (Isaakson, forthcoming).

The finds that document the importance of the marine environment have been found in a wide variety of contexts in the sanctuary. And their presence is quite

prominent in the Geometric, Hellenistic and Early Roman periods, although a scatter of such finds has been observed in every period. Many of them, especially the more durable seashells and fishing tools, have been found in fills and in re-worked earth matrices, areas and deposits which have been altered and restructured in the process of the repeated rebuilding and landscape modification that took place in and around the sanctuary. These finds are often dated with considerable accuracy, and in certain cases, several groups of finds can be assigned to specific temporal horizons that often can be identified across the excavation. Many of the fish bones, seashells and fishing tools have been found in closed deposits, for which the process and temporality of their formation can be established. It should be noted, however, that the picture described above does not necessarily reflect the initial importance and deposition of the fishing-related finds, but to some extent forms a residual or palimpsest of ritual activities. Material from certain phases of activity is better preserved than from others, while the choice to excavate certain features and not others has undoubtedly biased the final outcome.

It is obvious that because of the limitations of sampling, more than one level of analysis needs to be adopted. The first level of study, site wide, is chronology: materials from various deposits are grouped by contexts of the same date. This type of analysis lacks detail and specificity, but allows for the detection of long-term trends in fish and seafood exploitation, in culinary preferences, and other such broad issues. The second level of analysis is that of the activity horizons, where materials that were produced and deposited in a clearly identifiable period of activity are grouped together.

At the sanctuary of Poseidon, especially in the area of Building D (Wells, Penttinen and Hjohlmán 2007, 45–48), four such phases of activity have been identified in the Archaic period; and the fish (and other) remains from this structure have been grouped accordingly (Mylona, forthcoming a). Analysis on this level provides a relatively fine resolution of results and at the same time permits the detection of variability over shorter periods of time or across space. Third level of analysis is that of the single event, or contemporary related events, that produced a clearly distinguished set of remains. These latter cases provide more detailed and thus finer contextual resolution, but they do not facilitate comparison, unless the excavation is sufficiently extensive to have produced many similar types of contexts. Fishing-related finds from three well-defined contexts are discussed below, serving to illuminate different aspects of the relationship between the visitors to the sanctuary and the marine environment.

Analysis of Deposits

The so-called “dining deposit” is an undisturbed accumulation of table debris consisting mostly of drinking, cooking and serving vessels, animal bones, seashells,

charcoal, carbonized seeds and small objects, including lamps and datable coins (Wells et al. 2005; Mylona et al. 2013). Chemical analysis of a control soil sample from this deposit revealed the presence of sea algae (Isaksson, forthcoming), which obviously implies the use of seawater, transported to the sanctuary from some distance. No vessel in the deposit appears to be complete (Wells et al. 2005) and the mammal bones, despite the fact that they represent every part of the skeleton, do not comprise articulated carcass cuts (Mylona, forthcoming a). It appears that only a part of the dining refuse had been deposited at this spot. The deposit had accumulated in a triangular space, specially constructed for the purpose, west of Building D (fig. 14.3). Internal features of both the animal bone and pottery assemblages suggest a one-time deposition. The excellent preservation of the most fragile animal remains, which is quite unlike the situation almost everywhere else in the sanctuary, reinforces this possibility.

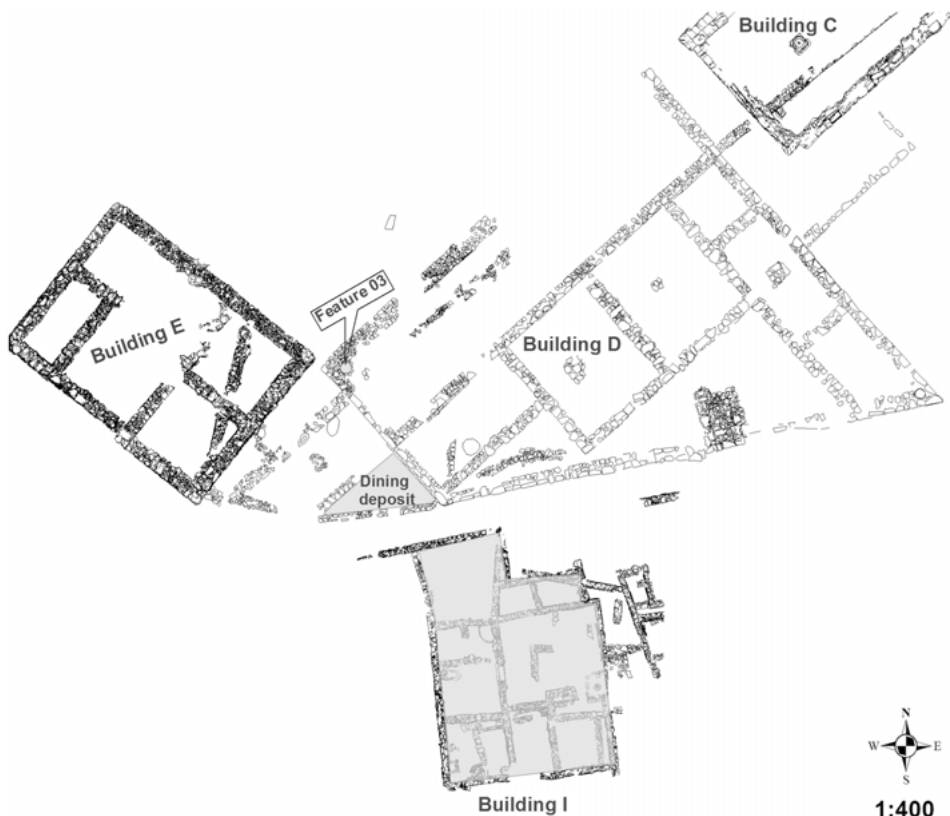


Figure 14.3: Site plan with “dining deposit”, Building I, and cistern (Feature 03) (drawing E. Savini).

The fish remains from the “dining deposit” consist of a moderate number—111—of identifiable bones and many more—1,092—non-identifiable fragments. These, along with the rest of the bones, were not only well preserved in the soil, but they had also been minimally affected by pre-depositional destructive factors such as scavenging or trampling. This assemblage is particularly rich in taxa (table 1). It appears that at least eighteen different species of fish had been consumed. Among those, very few were small fish (less than fifteen centimeters in length), and those are either picarels (Centracanthidae) or small combers (Serranidae) and seabream (table 1). Most of the fish remains originate in medium size specimens (fifteen to thirty centimeters in length) and the majority of them are seabreams (the common seabream [*Pagrus pagrus*], the gilthead seabream [*Sparus aurata*]), groupers (*Epinephelus* sp.), combers (Serranidae), meagre (Sciaenidae), wrasse (*Labrus* sp.), weaver (Trachinidae), scorpion fish (Scorpaenidae), and picarel (Centracanthidae). It is interesting that most of these fish are species that could grow to even larger sizes. Their young age, which is reflected in their relatively small size, might be an indication that the fish had been caught near the shore (Wheeler and Jones 1989, 163) or alternatively might speak of intensively fished waters (Haedrich and Barnes 1997; Højte 2005, 140).

An almost equally large number of remains belong to large individuals more than thirty centimeters in length. This category is the most varied: thirteen of the forty-seven specimens are from large migratory species. Some of them are from tuna, about one meter in length; one is from a little tunny (*Euthynnus alletetatus*); some are from indeterminate Scombridae; one example is a swordfish (*Xiphias gladius*); and two from an amberjack (*Seriola dumerili*). Another category of large fish remains includes bones of euryaline fish, which inhabit brackish waters, such as lagoons and river estuaries. One eel (*Anguilla anguilla*) and two grey mullet (Mugilidae) bones have been identified. Finally, several of the bones in this category belong to inshore fish, which inhabit shallow coastal or medium-deep waters. Many of the remains in the large fish category are from seabreams (common dentex, or *Dentex dentex*, and common pandora, or *Pagellus erythrinus*). Several of the large fish bones belong to groupers (*Epinephelus* sp.); two of them to scorpion fish (Scorpaenidae) and one to either a conger eel or a moray (Congridae/Muraenidae).

All the fish represented in the assemblage, apart from the migratory, were brought on site and consumed whole. This is evident from the fact that all parts of the skeleton are represented among the fish bones found. The migratory species, on the contrary, are only represented by vertebrae. No head bones, pectoral or pelvic bones have been recovered. This discrepancy in the representation of bones between the different groups of fish is perhaps an indication that the seasonal large fish were brought on site already processed to some degree, certainly beheaded, and perhaps already cut in slices or chunks. It is also possible that they were even preserved in some way. Apparently the two categories of fish went through different processes on their way to be consumed.

Table 14.1: Fish and seashells recovered from the sanctuary of Poseidon at Kalaureia.

FISH	SEA SHELLS
Clupeidae	* Patellidae
<i>Sardina pilchardis</i>	* Trochidae
Angullidae	* Turbinidae
* <i>Anguilla anguilla</i>	Turritellidae
* Muraenidae/Congridae	* Cerithiidae
* Serranidae	Epitoniidae
<i>Serranus scriba</i>	Cypraenidae
* <i>Epinephelus</i> sp.	* Naticidae
* Carangidae	Tonnidae
Moronidae	Cymatiidae
* Sciaenidae	Cassidae
* Sparidae	* Muricidae
* <i>Dentex dentex</i>	Aporrhaidae
<i>Diplodus sargus</i>	* Cypraeidae
<i>Lithognathus mormyrus</i>	Pirenidae
<i>Pagellus erythrinus</i>	Buccinidae
* <i>Pagrus pagrus</i>	Nassariidae
<i>Sarpa salpa</i>	* Fasciolaridae
* <i>Sparus aurata</i>	Conidae
<i>Lithognathus mormyrus</i>	Dentaliidae
<i>Boops boops</i>	Arcidae
* <i>Pagellus erythrinus</i>	Glycymeridae
* <i>Pagellus</i> sp.	Mytilidae
* Centracanthidae	Pinnidae
* Centr./Sparidae	* Pectinidae
Pomacentridae	* Spondylidae
<i>Chromis chromis</i>	Ostreidae
Labridae	Chamidae
* <i>Labrus</i> sp.	Carditidae
Scaridae	* Cardiidae
<i>Sparisoma cretense</i>	Solecurtidae
* Trachinidae	* Veneridae
* Scombridae	
* <i>Thynnus</i> sp.	
* <i>Euthynnus aletteratus</i>	Decapoda
<i>Sarda sarda</i>	Echinodermata
Xiphiidae	Cephalopoda
* <i>Xiphias gladius</i>	
* Mugillidae	
Sphyraenidae	
<i>Sphyraena sphyraena</i>	
* Scorpaenidae	
Triglidae	

* Fish and molluscan taxa represented in the “Dining deposit”

No cut marks have been observed on any of the fish bones. Signs of chewing/crushing are scarce as well. Only one vertebra of a small picarel or seabream shows traces of chewing/crushing. Eating small fish whole, a common practice today, may account for the relatively low number of bones of the smaller fish in the assemblage (Jones 1986; Wheeler and Jones 1989, 69–78).

Burning traces on the other hand are more common. About twenty percent of the identifiable bones are burned uniformly brown or partially burned brown as if they had been thrown on coals of a fire. Only the bones of the largest fish show traces of burning (grouper, seabreams, grey mullet, scorpion fish, tuna and an indeterminate Scombridae). Burned bones are both cranial and postcranial. The bones give no clue to the way the fish was cooked, apart from the fact that there are no identifiable indications usually associated with cooking on the spit (Colley 1987). The same is true for the mammal bones. The evidence is consistent with a scenario of burning on an open fire, perhaps as a strategy of garbage disposal (Hayden and Cannon 1983; Walters 1988; Gifford-Gonzalez 1989, 187). On the basis of the evidence above, we have assumed that the cooking of fish most probably involved boiling and stewing. This option is supported by the fact that cooking pots, of various sizes and shapes, were among the most common pottery shapes in the deposit, with chytrai, deep bodied cooking pots, being more common than other, more open shapes (Wells et al. 2005; Mylona, forthcoming b).

The marine emphasis in the “dining deposit” is complemented by the presence of a considerable number of seashells. All in all seventeen taxa (in twelve families) were represented but the majority of them belonged to six species (table 1). Out of the 914 shells, 843 belong to limpets, top shells and ceriths. The topshells had their apex crushed, a clear indication that they had been consumed (Syrides, forthcoming). It is also further accentuated by the presence of marine algae in the soil, which could only be brought there intentionally, perhaps poured out as a libation (Isaakson, forthcoming; Mylona, forthcoming c).

Another closed context originated in a cistern (Feature 03) just north of the so-called “Building D” (fig. 14.3). This was constructed in the Archaic period, and was part of a system of at least two interconnected cisterns. After falling into disuse, in the Early Roman period (ca. A.D. 100; Ingemark, forthcoming), evidently while the sanctuary was still in use (Paus. 2.33.2), it was filled in with earth, stones, and an unusual array of other material suggesting a structured deposit (Wells, Penttinen, and Hjohlman 2007, 36; 41; 89–94). The cistern, which is over three meters deep, produced more than 13,000 animal remains and a large number of glass vessels. Pottery fragments were scarce and eroded, as were fragments of charcoal and seeds. The animal remains were unevenly distributed in the cistern’s fill, but a concentration of remains was observed in a thick layer about a meter below the surface.

Among the mammal remains collected (Mylona, forthcoming a; Lymberakis and Iliopoulos, forthcoming; Syrides, forthcoming; Serjeantson, forthcoming) were the bones of at least eight adult dogs of various sizes and of more than thirty-five puppies,

the first bearing cut marks and burning traces on them. Several dozen snakes of different sizes, both venomous and non-venomous species, were also partly burned. Bones from lizards and frogs, as well as a few bones of domestic mice and rats were also collected. Among the bird bones collected from the cistern are the remains of at least three chickens, one crow, and some small birds like partridge, possibly quail and also finch. The assemblage of animal remains also contained several hundred egg fragments, probably from chicken eggs, as well as the burned molar teeth of an indeterminate equid, the milk tooth of a very young horse and an assortment of fish bones of various species. A few bones of sheep, goat, pigs and cattle were also collected from the cistern. The marine elements that were particularly distinctive in this assemblage were about 2,500 intact purple shells (*Bolinus brandaris*) that varied in size from very small to medium-large. The otherwise uniform shell assemblage was interspersed with some more shells, mostly predators, such as the *Buccinulum corneum*, *Astraea rugosa* and *Fasciolaria lignaria*.

Taphonomic and stratigraphic observations suggest that these remains had all been deposited at the same time or within a very brief period of time. The combination of animal remains in the cistern is very unusual and their analysis suggests that they are of two kinds. On the one hand we have the disparate remains of animals that had been consumed. This sub-group shares several characteristics with meal leftovers from elsewhere on the sanctuary. This group contained, among others, fifty-one fish remains. These belonged to a large grouper (*Epinephelus* sp.), a parrotfish (*Sparisoma cretense*), a pandora (*Pagellus erythrinus*), two bogues (*Boops boops*), one sardine-like fish (Clupeidae) and some seabreams of medium size (Mylona, forthcoming a). Several of these fish bones were burned black.

On the other hand we have remains of processes that involved some unusual (or at least unexpected) dining practices. These included animals such as the dogs, the puppies, the equids, and the crows. The masses of whole purple shells appear to belong to this group as well, because of their volume and their pristine preservation, which set the animal remains in this group apart (Syrides, forthcoming). We have no direct evidence to suggest whether the shellfish had been eaten or not before deposition. The remains of a hermit crab (found in one of the *Bolinus brandaris* shells) illuminate the possibility that the purple shells were not empty when deposited. No opercula of this shellfish have been found, though this could be attributed to their fragility. Even so, no other more durable opercula from shellfish, such as the *Astrea rugosa*, for example, have been recovered. Thus, the issue of whether the purple shellfish had been consumed before the deposition of their shells remains unresolved.

Finally, excavations in Area I, just outside the sanctuary, revealed a fairly large building, which has been dated to late Hellenistic and Early Roman periods (Klintberg et al., forthcoming). Traces of later activity in the area are too disturbed and patchy to allow for any secure conclusions to be drawn about it. This house was superimposed on an earlier structure (fifth and fourth century B.C.) with a somewhat different

orientation. In its initial Hellenistic phase, the building was a two-story house with room units on the three sides of an open courtyard in the east. In its Early Roman phase, the domestic character of the building had changed, evidently expanded to cater to a range of other activities, which probably include some craft production as well as small-scale commerce involving trade in objects and foodstuff. It appears that the house evolved gradually through its different forms and functions, including its abandonment, obviating the identification of clearly articulated stratigraphic events or transitions. Although the house is a well-defined context, and meticulous attention was paid to excavation and sampling techniques, the finds retrieved from its various spaces cannot be dated in a progressive chronological sequence, or linked to precisely defined activity surfaces. The marine component is very prominent in the Hellenistic, Early Roman and later phases of this Building in the form of fish bones and seashells in all phases, as well as the metal elements of fishing tools, from the Early Roman phase onwards.

In the Hellenistic phase of the building (Phase II), fish and shellfish were apparently consumed fairly regularly. We find their remains scattered in every excavated space. A fairly conspicuous concentration of them, however, has been found outside Room II-d, which has been tentatively identified as a kitchen, on architectural grounds. Scales as well as spines and vertebrae of very small fish (small bogues or/and picarels), many of which are burned black, along with a large number of sea shells from typical food species (such as limpets, ceriths, top shells and purple shells), clearly indicate food preparation and remains of meals, probably reflecting one of the last dining events prepared in this building prior to its remodeling. Among the fish consumed by the inhabitants of the building, certain types are conspicuously absent, such as eels (either conger/moray eels of marine origin or the catadromous eel that seasonally enter fresh waters) and the migratory Scombridae (tunas, pelamids, mackerels). This is particularly interesting if we consider that in the nearby Hellenistic “dining deposit” both these categories of fish were consumed in considerable quantities.

In the Early Roman phase (Phase III) of the building, foods of marine origin were still prominent, but more varied. This situation is reflected in other classes of food as well (Klintberg et al., forthcoming). Certain rooms/spaces also exhibit a higher concentration of fish and shellfish remains. These are the rooms which seem to have been related to food preparation and possibly food serving (rooms IIIc and IIIf). What is of particular interest, especially in the Early Roman phase of Building I (and in the later mixed layers) is that among the many small finds recovered, such as balance weights and coins, the fishing implements are quite prominent. Most of the finds are net weights, in the form of folded lead rectangles that were meant to be placed in regular intervals around a casting net or at the bottom of a seine net. One of these objects preserved traces of the net’s rope, which surprisingly was made of oleander fibers (*Nerium oleander*) (C. Alfaro, pers com.). Large bronze rings may also be interpreted as elements of a net (e.g., in Galili et al. 2002).

The second type of fishing implements is represented by a lead hook and line weight, with a conical shape and a perforation near its top (fig. 14.4). Several fish-hooks have been recovered, which are of various sizes and suitable for different types of fish. These finds were not found *in situ*, but scattered within Building I. Thus we are not able to estimate the original tool's exact configuration (e.g. size of net, number of hooks attached to each line, associated elements, etc.), but their presence in Building I requires some explanation. The fact that fish and seafood were consumed fairly regularly in this building makes it plausible that some of its inhabitants were involved in seafood procurement, and so the tools might have belonged to these fishermen. On the basis of the various finds, however, it seems plausible that Building I served in the Early Roman phase as a food and possibly small-objects shop. In such a context the fishing implements could be sold to a clientele that probably bought them as offerings (along with several other objects) to the god in the nearby sanctuary; similar objects found scattered within the sanctuary could represent such interest in treating these objects as votives. The lead objects could well have been fashioned into tools to be sold, even within Building I, where we find evidence for the extensive use of lead—a very pliable metal, easily melted in several applications.



Figure 14.4: Bronze fish hook (MoP 1460.1) (photo C. Mauzy).

The Fishermen and Fishing Practices

In a sanctuary of Poseidon, the presence of marine implements and animals is to be expected. The answers to a number of questions, however, are not self-evident. For example, in the sanctuary, more than one deity was worshipped—we have recovered evidence for the cult of Zeus Soter, Aphrodite, Asklepeios (Wells, Penttinen, and Billot, 2003); perhaps Demeter in Building D (Wells et al. 2005); and ancestors as well (Hjohlman, forthcoming). Was the sea also prominent in their cults? What were the specifics of the use of fish and seafood in cult practice? Do the fish, shellfish and fishing tools represent dedications or offerings suitable for a sea god, or for the votaries, that is, we assume, the mariners and fishermen who frequented the sanctuary? And who were these people who made a living off the sea and what constitutes the details of this livelihood?

The island of Poros is situated in a fairly eutrophic area of the Aegean (Lykousis et al. 2002, 316), the Saronic Gulf, which being near Athens was intensively fished in antiquity (Mylona 2008, 60–61). The fish and other seafood found at the sanctuary of Poseidon at Kalaureia represent various marine habitats and different fishing techniques. Most of the catch is made up of inshore creatures, fish and marine mollusks that live near the coast in shallow or medium deep waters and various types of seabed, with a distinct predominance of those adapted to rocky or mixed environments, that is, the typical kind of shoreline around Poros and the nearby Peloponnesian coast (fig. 14.2). The most common fish in this group, such as the seabreams (Sparidae), the combers and groupers (Serranidae), the wrasses (Labridae), are fish that are either solitary or live in small groups, depending on their age and life cycle. As a group they are available all year round, providing that the weather permits fishing at sea.

Shellfish such as the purple shells (Muricidae), the ceriths (Cerithiidae) and the spiny oyster (Spondylidae) along with various marine invertebrates such as the cuttlefish, the sea urchin and the crabs should be viewed as part of this inshore domain, as they are all easily found near the coast, often caught in nets. The culling of other shellfish, the rock dwelling limpets (Patellidae) and top shells (Trochidae), is accomplished easily on the coast, even without tools. Few of the seashells encountered at Kalaureia require diving or specialized tools required for deep-sea fishing. The pen shell (*Pinna nobilis*) and the tun shell (*Toma galea*) are good examples. These shellfish, however, although edible, were also used for the manufacture of artifacts such as inlays and scoops. Therefore the effort to locate and collect them could be justified not only by culinary interests but also by these other uses.

A review of ancient fishing manuals such as Oppian's *Halieutica* (Mair 1963) and of more recent accounts of traditional fishing in the Aegean (e.g., Apostolides 1883; Athanassopoulos 1925; 1926; Zappas 1968; Zachariou-Mamaliga 1986) indicate that for capturing inshore fish, a wide range of multipurpose and specialized tools was (and still is) employed, along with a large variety of crafty tricks (decoys, special baits). Five basic fishing methods were employed, including hook and line, netting,

trapping, poisoning and spearing. These led to the formation of a vast number of specific tools, which vary in size and complexity (see Leukadites 1941; von Brandt 1972; Gallant 1985, 12–25). They all take advantage of the ethology of inshore fish and their natural tendencies to respond to certain stimuli (Morales Muñiz 2010). Representations in ancient art and literature also indicate the types of tools used in coastal fishing, even though there is some uncertainty on the correspondence of names to specific types of fishing tools (Gallant 1985, 12–25; Bekker-Nielsen, ed., 2005; Bekker-Nielsen and Bernal Casasola, eds., 2010).

Excavations at Kalaureia provide the archaeological testimony for the use of several of these tools. Fishhooks and line sinkers (fig. 14.4) are what is left from the line and hook tools (e.g. simple handheld line and hook operated from the coast; or from a boat, long-lines of various configurations). Sussane Bocher reports that the hooks vary in size from fairly small (with just under one centimeter spread) for fish such as the small seabreams (e.g. *Lithognathus mormyrus*, *Pagelus* sp.) to fairly large ones (over two centimeter spread) for fish such as the groupers (*Epinephelus* sp.) or the large barracuda (*Esox lucius*). The conical lead sinkers suggest that the target species for at least of some of these tools were bottom dwellers, requiring one to sink the hook and bait. Nets are represented by a number of folded lead sheets that form the sinkers in nets such as the cast or the seine net. These lead net-weights are fairly typical finds in a variety of depositional contexts around the Aegean, but as they are usually found or published as individual objects, out of context, it is not possible to estimate the size or the form of the net they originate from (for prehistoric examples see Powell 1996, 118–120; for examples of historical date see Stavropoulos 1938; Robinson 1941; Jameson, Runnels, and Van Andel 1994, 315). Exceptions are rare, and a lead net-weight found in Building I dating to the Early Roman period preserves traces of the net's oleander fiber cord to which it was attached (Klintberg et al., forthcoming).

Harpoons have not been found so far in the sanctuary, with the exception of a bronze trident—probably an attribute of the god rather than a fisherman's tool—found in the early excavations in the Temple of Poseidon (Wide and Kjølberg 1895, fig. 28). The fact that such tools have been found elsewhere (e.g. at Archaic Isthmia, Gerhard 1998, 108; Bucholz, Johrens, and Maull 1973, 167) suggests that the use of harpoons was a fishing practice around the Aegean in the historical period.

Some fishing methods for targeting inshore fish, such as the poisoning or the use of mobile and perishable traps, would leave no direct traces (Gunda 1984). The use of poison to stun fish and make their capture with a scoop or cast net easy is attested by ancient authors such as Oppian in the second century A.D. (*H.* iv.647ff) and Pliny (*HN* 35.120). Anaya Sarpaki has identified spurge seeds (*Ephorbia helioscopia*) among the carbonized material (Sarpaki, forthcoming). Spurge is a plant traditionally used in Greece and elsewhere as fish poison (von Brandt 1972, 24; Rose and Steyn 2004). We could speculate that these seeds ended up in the sanctuary intentionally along with other fishing-related objects and material traces, such as fish bones, seashells,

fishing implements, and seawater residues. However, because the same plant is often encountered around settlements as a weed, the presence of its seeds at the sanctuary might be coincidental and unrelated to fishing.

The use of traps or bait baskets on the other hand is attested at Kalaureia in a rather indirect manner. The Early Roman fill in cistern Feature 03, contained over 2,500 purple shells (*Bolinus brandaris*) deposited in a thick homogenous layer (Wells, Penttinen, and Hjohlman 2007, 89–94; Syrides, forthcoming) (fig. 14.5). Among these samples, Georgos Syrides recorded the presence of a very limited number of other species, such as *Buccinulum corneum* and *Astrea rugosa*. *Bolinus brandaris* is one of the three types of the Muricidae shellfish in the Aegean that produce purple dye, the other two being the *Hexaplex trunculus*, and the more rarely used *Thais haemastoma*. The Muricidae are carnivorous animals, feeding on other mollusks by boring a hole in their shells. They also feed on dead flesh, and for this reason they are often brought up by fishing nets, as they attach themselves to the captured fish. When other food is not available they are known to feed on each other.

Recent archaeological and historical research has shown that in antiquity, the purple dye industry, which flourished along Mediterranean coastlines, including the coasts of the Aegean, was supported by vast quantities of purple shellfish that were caught mostly by bait baskets. It has also been shown that this fishing method led

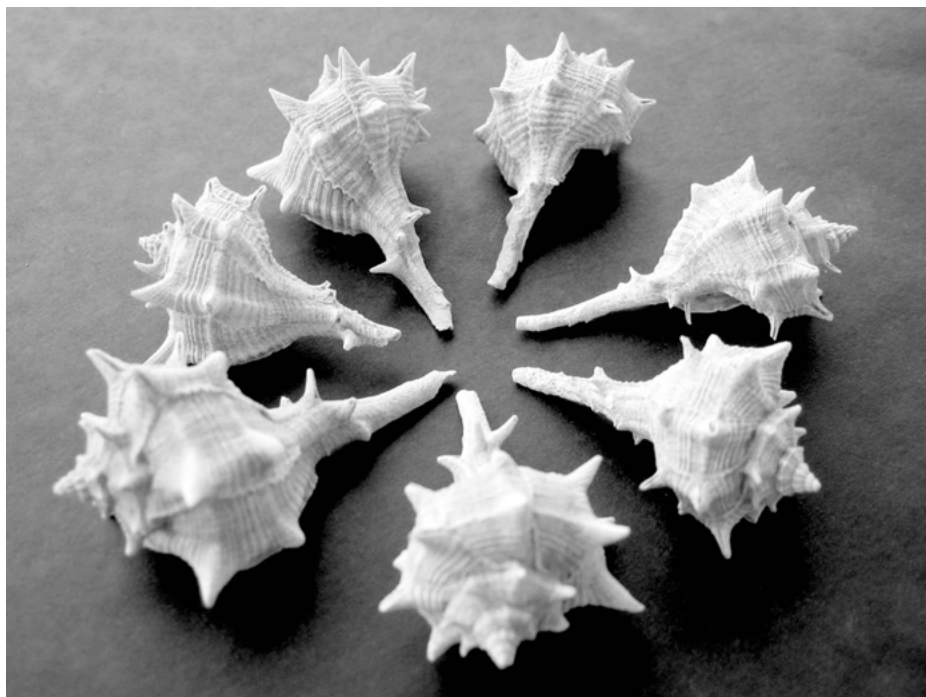


Figure 14.5: Purple shells (*Bolinus brandaris*) from the cistern (Feature 03) (photo M. Nilsson).

to the accidental capture of some other animals who were attracted to the baskets (Kommos, Ruscillo 2006; Euesperides, Tébar and Wilson 2008; Chryssi island, Mylona, pers. obs.; Alfaro and Mylona, forthcoming). These are exactly the species found intermixed with the otherwise homogenous *Bolinus brandaris* assemblage from the cistern. From this we assume that the purple shellfish found in the cistern had been caught by bait baskets, one of the most common trapping devices in antiquity as well as today (Oppian, *Hal.* iii.73–90; 342; 398–413; Aelian, 12.43; Leukaditis 1941, 133–137; Von Brandt 1972, 93–104).

Purple dye production was apparently practiced in the vicinity of Kalaureia on the Peloponnesian coast, at least as early as the fifth century B.C. Hermione, a town just twenty-five kilometers southwest of Kalaureia (fig. 14.6) was known in antiquity for its purple-dye production. Plutarch, in the first century A.D., reported that when Alexander entered Darius's treasury at Sousa he found 5,000 talents of Hermionean purple, which in spite of its age (190 years old), still retained its brightness (Plut. *Alex.* 36). Nowadays, masses of crushed *Hexaplex trunculus* shells can be seen among the antiquities in the town. Hermione apparently had various links to the sanctuary of Poseidon at Kalaureia. Yiannis Basiakos identifies Hermione as the source of some of the metal used or reworked in the sanctuary (Basiakos, forthcoming). Moreover, Hermione was one of the seven cities that formed the Kalaureian amphictyony, though at an uncertain date (Kelly 1966; Mylonopoulos 2006, 129–36). There is evidence that besides Hermione, some purple processing took place in various spots in the vicinity of Poros, especially on the Epidaurean coast to the west (Archontidou-Argyri 1975). It seems quite likely that the pile of purple shells found in the cistern has its origin, either as a dedication or as feasting remains, in the purple fishers or purple dyers of the area around Kalaureia.

The second group of fish, Scombridae (e.g., tuna and pelamids), is an open-sea species, migrating to and from their spawning grounds. In the Aegean they appear twice a year, in spring and autumn, and at different times in different locations along their route. They move in large schools that on occasion, depending on currents, seabed morphology and food availability, approach shore, within meters of the coastline (Athanasopoulos 1923, 1924; Bintliff 1977, part i: 117–122; Guest-Papamanoli 1985a, 1985b). Although they can be caught by long lines if they are encountered in open sea, they are known, probably already in classical times, to have been gathered by stationary coast-based traps. These consist of a watchtower, from which the fishermen followed the approach and movement of the fish. The towers were constructed of wood in the shallow waters near the coast, or they were positioned on elevated areas along the rocky coast (Fernández Nieto 2002, 244). The watchtowers were complemented by a set of nets and poles, which formed a kind of a labyrinth in which the fish entered and were unable to escape (Paraskeuopoulos, 1935–1936; Maggio 2000). These were known as *thynneia* in ancient Greece, (*ntaliani* in Turkey, *madragues* in France, *tonnara* in Italy, *almadrabas* in Spain) and the inscriptional record attest to the presence of such arrangements from at least as early as the Hellenistic period (Cos:

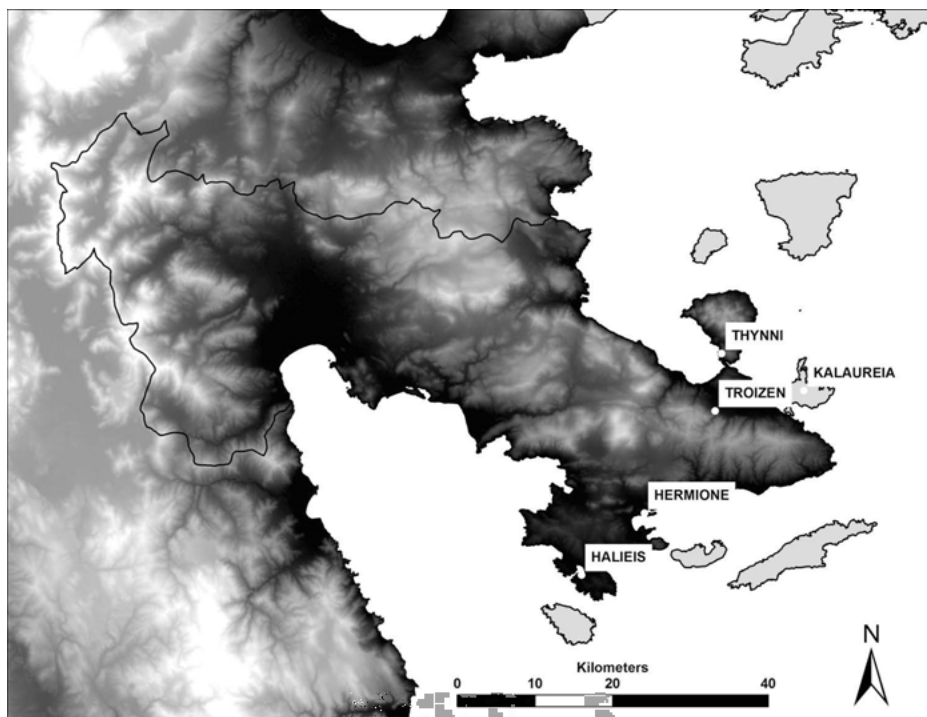


Figure 14.6: Aerial photography showing location of Kalaureia, Poros, and the Argolid (ASTER GDEM is a product of METI and NASA).

SIG [4] 1000, Sherwin-White 1978, 229–235; Troizen: IG 4[2] 1. 76–77; Ager 1996, 381). The function of *thynneia* in a certain area is usually linked to the operation of fish-processing installations; catches of the *thynneia* are usually massive, and because the *Scombridae* spoil quickly due to their high blood content, immediate processing of their flesh is required. At Kalaureia, tuna, pelamid and mackerel bones are found mostly in Hellenistic strata (Mylona, forthcoming a; Klintberg et al., forthcoming) (fig. 14.7). The largest of them, the tuna are of a relatively small size of about one meter in length, while there are instances of really large animals between two and three meters in length (Mylona, pers. obs.). (In many cases it cannot be determined whether the bones belong to small individual bluefin or yellowfin tuna [*Thunnus thynnus* or *Thunnus albacares*], or to normal size individuals of the smaller longfin (albacore) tuna [*Thunnus alalunga*].)

The area near Poros is still a well-known exploited route for *Scombridae*, which despite their much-reduced numbers are caught in spring and autumn months. On the western coast of Methana peninsula (fig. 14.6) in a small bay unsurprisingly called Thynni, a *thynneio* is still functioning, although at present it handles a variety of fish and not necessarily any members of the *Scombridae* family. The existence of *thyn-*

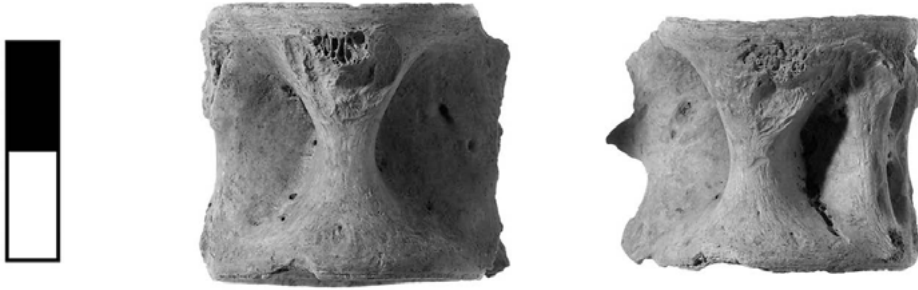


Figure 14.7: Tuna vertebrae from the sanctuary of Poseidon (photo C. Mauzy).

neia in the area already in antiquity is documented by a Late Hellenistic inscription found in two copies, one at Troizen (IG 4[2] 1. 77) and the other at the Epidaurean Asklepieion (IG 4[2] 1. 76). According to these inscriptions, a third copy was also kept at the Sanctuary of Poseidon at Kalaureia. The inscription attests to an agreement between Troizen, a city on the mainland across the straits southwest of Kalaureia (fig. 14.6) and another city, most probably Arsinoe, on the Methana peninsula west of Kalaureia (very close to the aforementioned Thynni bay), for the sharing of the revenues of a common strip of land on their borders. The migratory fish catches from their commonly owned waters or more precisely, the commonly owned fish traps (IG 4[2] 1. 77; Nikitsky 1964; Peek 1969; Ager 1996, 381–385; Lytle 2006, 119–129) is one revenue stream, along with salt derived from the pans in the same area. The inscription, which is close chronologically to the accumulation of the Hellenistic “dining deposit,” supports the idea that the fishing of tuna in the area, especially in Hellenistic times, was a specialized activity, which most probably involved salting as well. The tunas and pelamids consumed in the dining episode discussed above—as well as other contexts—might have originated from the area’s fishing community that worked the *thynneia* and preserved the fish. The economic importance of migratory fish is a rather controversial issue in the literature (Rose 1994, 429–447; Mylona 2008, 43–49; Lytle 2006, 2012). Recent research and a better understanding of fish biology have allowed for some progress in understanding their importance (Lytle 2006, 2012; on the biology of Sombriidae, see Block and Stevens, eds., 2001). The distinct character and the economic importance of *thynneia* and fish-processing plants are demonstrated by the existence of a number of inscriptions that refer to the leasing of *thynneia* and watch towers in various parts of the Aegean (Rhode 1892; Lytle 2006). The extensive references in ancient literary sources to preserved tuna in its various forms (Mylona 2008, 85–86) also attest, albeit indirectly, to the presence of fish processing establishments.

The third group of aquatic animals that have been identified in the sanctuary of Poseidon are the euryaline fish, that is, species that can tolerate considerable changes in the water’s salinity; and for this reason they are known to move to and

from salty or low-salinity waters for feeding or spawning. The eel and the gray mullet are fish found at their best in fresh or brackish waters, although both can be caught at sea. Additionally, several taxa of the Sparidae family such as the gilt-head seabream (*Sparus aurata*) or the annular seabream (*Diplodus annularis*) and black seabream (*Spondyliosoma cantharus*) are often found in river estuaries or coastal lagoons and can be caught en masse on a seasonal basis using specialized fishing devices (Guest-Papamanoli 1985a; Koutrakis 2011).

Large stretches of the Peloponnesian coast across from the island of Kalaureia are now shallow muddy marshes covered with reeds. Coastlines with similar environments can be found today at the base of Methana peninsula, towards the west. Shallow marshy coasts and coastal lakes were features in antiquity as well—the famous *Foivaia* or Saronic Lake (Moustoxides 1843, 6–9) was a coastal lake in the Troizen area at least from the Classical period. Such environments are rich biotopes, which were used in antiquity for a variety of purposes apart from fishing. For other parts of Greece sources refer to the use of reeds, and hunting of birds (Antiphanes *A Lady's maid*, fr. 127 and Theophr. *HistPl.* iv.x.1–2, vi.x.6; Strabo 4.325). At Kalaureia we have evidence for the use of the same type of environments as a source for water snakes (Lymberakis and Iliopoulos, forthcoming), and probably also frogs, that were evidently used in a certain kind of ritual (Mylona, forthcoming c).

The extent and complexity of the economic exploitation of these euryaline environments is far from clear. The few literary references to the issue suggests that in certain cases such resources, like fish in coastal lakes, were controlled or leased out (often by sanctuaries) to fishermen. Pausanias, for example, in the second century, recounts that the fishing rights in the sacred Rheittoí River, a stream that at present connects the sea to a spring-fed lagoon, were reserved for the priests of the Sanctuary of Demeter and Kore at Eleusis in Attica (Paus. i.38.1, trans. Levi 1971, vol. 1, 106, no. 226; Rose 2000, 523–524). We do not know what the situation was in the vicinity of Kalaureia, but we might assume that certain fishermen were involved, and that involvement could even have been specialized.

Fish and Fishermen in Cult Practice

The marine elements found in the Sanctuary of Poseidon may be interpreted as the remains of several different and parallel processes, such as sacrifice, offering, and dining. Although some interpretations appear to be clearer or more secure than others, the examination of parallel processes from elsewhere around the Aegean, along with contextual considerations from the sanctuary itself, may reveal a variety of possible practices. One of the most widely held ideas about fish in historical and archaeological literature is that Greeks believed that fish were inappropriate for cult contexts and unsuitable victims for normal sacrifice—with tuna and the eel being exceptions to the

rule. The explanation given by scholars is that these are not like other fish because they are bloody, thus conforming to one of the demands of normative *thysia*, which requires shedding blood on an altar (Burkert 1983, 204–212; Durand 1989, 127–128; Sparkes 1995).

An idiosyncratic case of eel sacrifice by the Boeotians to the Unknown Deities, apparently unusual in contemporary practice, was already attributed in antiquity to an ancestral custom (Agatharchides *European History*; Radcliffe 1974, 215; Burkert 1983, 208–209; Simoons 1994, 275). The sacrifice to Poseidon of the first tuna caught every season, in a special rite called *thynnaion* at the deme of Halai Aixonides in Attica in the northeastern Saronic Gulf, also has the character of an unusual practice in the fourth century B.C. Athens (Burkert 1983, 208–209; Simoons 1994, 275). Interestingly a third-century source refers to a similar custom at Halieis, in the Argolid, a short distance to the southwest of Kalaureia. There, during the tuna season, the fishermen celebrated a festival dedicated to Poseidon and they sacrificed the first-caught tuna to the god. This offering was called “*thynnaeon*” (Antigonus Carystius, *On Diction*, in Ath. xi 466c). A small number of vessels dating from the Archaic to the Hellenistic times are decorated with scenes that involve large fish, presumably tunas, lying on a table-like object and a man holding a large blade, very much like the sacrificial knife. These have been interpreted as tuna sacrifice scenes, but a very persuasive argument to the contrary interprets them as market scenes, where tunas were cut up to be sold (Sparkes 1995).

The archaeological record from the sanctuary of Poseidon does not provide any conclusive evidence that the tuna bones found there originate from animals sacrifice. Most of them have been found in dining contexts and thus a direct link to sacrifice is not possible. It should be noted however, that, so far, no remnants of animal sacrifices have been found that are clearly associated with an altar, and thus directly interpreted as sacrificial remains (Mylona, forthcoming a). Given that tunas were occasionally sacrificed in the Greek world—as was the practice at nearby Halieis (fig. 14.6), and the Halai Aixonides across the Saronic Gulf—similar use at Kalaureia is likely, though contextually inconclusive.

Fish, seafood and fishing tools could have been offerings to Poseidon or another deity. Offerings in the form of artifacts such as miniature fish figurines or engraved metal plates with depictions of fish are fairly common finds in Archaic and Classical sanctuaries (Bevan 1986, 133f). Dedications by fishermen, taking the form of fishing gear and cooked fish was apparently also common in various periods (e.g. Apollonides, *AP* 6.105; Deonna 1938, 200). Implements of the trade, such as fish hooks and netting needles have been found in sanctuaries like Olympia, Isthmia, and Kommos (Baitinger and Völling 2007, 57–66; Gebhard 1998, 108, Raubitschek 1998, 121, pl. 71, no. 453; Schwab 2000, 391–395, pl. 5.48, 5.49), and Greek epigrams of various dates poetically emphasize the widespread occurrence of such gestures (e.g. Anonymous *AP* 6.23; *Anthologia Palatina*). The many fishing tools, hooks, nets and line sinkers that were found at the Sanctuary of Poseidon at Kalaureia are most likely evidence of

this kind of ritual practice. The purple shellfish found in the cistern (Feature 03) could have been offerings, perhaps brought by worshipers involved in purple dye industry. Individual shells and fish (cooked or raw) could be offerings as well (Theodoropoulou 2013).

The majority of fish and seafood remains from the sanctuary of Poseidon appear to have been food remains. Their eventual consumption does not preclude their previous use in sacrificial rituals or as offerings, of course, but their consumption is definitely more visible archaeologically. These remains have been found in close association with cooking pots, drinking vessels and other cooking and eating remains such as mammal bones, carbonized seeds, and charcoal, and bear clear signs of being cooked and eaten (cut marks, burning, chewing marks).

There is good epigraphical evidence for the inclusion of fish in sacred meals—that is in formal dining events taking place in sanctuaries as part of cult activities. Eight almost identical inscriptions (temple accounts) from Delos, dated to the first decades of the second century B.C. (Homolle 1882; Linders 1994), state this clearly: when women were celebrating the festival of Eilithyaia, provisions were made for the purchase of some type of preserved and probably some fresh fish, among other food items, which included lamb, cheese, sesame, honey, vegetables, walnuts, and wine. Fish, however, was not among the food articles required for the men's feasting at the Posideia, at festival in honor of Poseidon (Linders 1994).

Two other Hellenistic inscriptions, from the islands of Thera and Cos, contribute an even more elaborate picture. The first inscription (also known as the "Foundation of Epiktete") is a sacred law dating to around 210–195 B.C., that defines in detail how the heroes, ancestors of Epiktete, are to be worshiped. It is specified that three fish be offered to them alongside pastries and the customary divine parts of the sacrificial victim (IG 12[3] 330). The other inscription, almost a century earlier (325–300 B.C.) is also a sacred law, known as the "Foundation of Diomedon of Cos" (SIG[3] 1106). It is a religious ordinance, which includes directions to the priests for the cult of ancestors. It specifies that the priest should provide the animals and wood for the sacrifice, and from these he would receive a thigh and the skin. He is also to perform an *apopyrida* according to the ancestral custom. *Apopyrizo* means to eat some food plucked straight out of the coals (Hesychios s.v.). *Apopyris*, as a noun, denotes a sacrifice, which involves the burning of the offering in the fire, but is often taken by researchers to mean a sacrifice in which fish were totally burned (LSJ s.v.; SIG [3] 1106). If this is so, then the directions in the above-mentioned inscription, in essence, arrange for the consumption of fish by the priest. Whether this was followed by fish consumption by the worshipers, that is, the members of the association, is not clear, but it seems plausible.

The available evidence suggests that, on certain occasions, fish was an important food in dining events within sanctuaries. At Kommos, a coastal site in south-central Crete, 509 fish remains were found in the Hellenistic strata in Temple C, mostly from a floor deposit but also a few from hearths and other fill deposits (Rose

2000, 556–559, Table 6.23). These fish bones originate from a variety of coastal species. An exception to this is the single bone of a catfish (*Clarias gariepinus*), a fresh-water fish imported from either Syria-Phoenicia or Egypt (Rose 2000, 499 and 498–506, Table 6.14). Most of the fish were small or medium in size, but larger fish, such as large groupers or cartilaginous fish, were also present. All the bones, with the exception of five specimens from the interior of a hearth, are unburned (Rose 2000, 536–537) in contrast to the fish assemblage from the Geometric Temple B, where many of the fish remains, especially those found in association with altars, had been burned. According to Rose, the fish remains from Temple C probably represent formal dining refuse (Rose 2000, 536–537).

Another case of dining on fish in a ritual context is the Demeter and Kore sanctuary at Corinth (Bookidis et al. 1999), where the excavation of two Classical dining rooms has produced, among other finds, forty-nine fish bones. They all belong to very small seabream, eleven to fifteen centimeters in length. The assemblage comprises both cranial and postcranial elements (Bookidis et al. 1999, 38–39). According to Snyder, who analyzed the assemblage, these small fish may have been prepared by boiling or frying, or they might have been part of a fish sauce (Bookidis et al. 1999, 44). These small fish remains recall the fish on the Eileithyaia menu, though the two contexts represent different regions and dates.

Fish bones have been found in various sanctuaries. Because in most cases bone collection was done only by hand or by dry sieving with a relatively large mesh, few items are reported in each case. In the Hellenistic deposits of the Zeus Sanctuary in Pilarou Cave on Thera, the remains of a gilthead seabream (*Sparus auratus*) have been found along with those of a bluefin tuna (*Thunnus thynnus*) and some indeterminate fish bones. According to Becker, these remains probably represent food refuse (Becker 1997). Other fish remains of broadly contemporary strata have been found in the Hero and Demeter Sanctuary at Messene in the Peloponnese. More specifically a bluefin tuna vertebra (*Thunnus thynnus*) has been recovered from a third- to second-century B.C. deposit near the temple of Artemis Orthia, and four remains of grouper (*Epinephelus* sp.) from a second- to first-century B.C. fill deposit south of the Asklepieion (Nobis 1994, 303). Whether these fish remains represent dining refuse or ritual deposition is uncertain because no contextual information is provided.

At Kalaureia, we can say that fish were regularly eaten in the sanctuary from as early as the Geometric period. The burned fish remains from a number of pits that date to the eighth century B.C. probably mirror the practice at Temple B in Geometric Kommos (Wells, Penttinen, and Hjohlmán 2007, 14; 20–49; Mylona, forthcoming a). Although fish remains were brought to and consumed in the sanctuary throughout its use phases, the Hellenistic period stands out as a time period when the marine elements in the sanctuary were particularly noticeable, and complemented by an emphasis on these resources outside of the sanctuary as well (in Building I). The dining deposit described above reflects a feast whose participants had access to all sorts of marine resources. They contributed to the feast with their own provisions, in

the form of boiled or stewed food (Mylona, forthcoming b), and the fact that many of them chose fish and seafood could reflect either the participants' own involvement with fishing or the special character of the dining occasion or dedication.

Although the available evidence from Kalaureia alone is not sufficient to prove one or the other interpretation, evidence from elsewhere in the Greek world may contribute to our understanding of the use of fish within the sanctuary. Poseidon is often associated with fish offerings and apparently fish eating (e.g. Antigonos of Carystos, *On Diction*, fr. 56A–B; Crates *Sacrifices at Athens*; Paus. iii.21.5; Plut. *Quest. Conv.* 730e; SIG[4] 1024), but there is evidence that this was not part of a standard pattern (e.g. Agatharchides *European History*; Apollonides *AP* 6.105; Hierophytos, *Cronicles of Colophon*; SIG[4] 1024; SIG[4] 1000). In his survey of fish—both real and representational—in sanctuaries, Rose suggests that some gods—Poseidon, Hermes, Artemis and Priapos—might have had a stronger association with fish (Rose 2000, 520–536 and Archippos, *Fishes*, fr. 18; Ath. vii 287a; Hesychios, *Lexicon*). In the case of the cult of Atargatis, fish are prominent (Simoons, 1994, pp. 269–270, Lightfoot 2003 and Novaro-Lefèvre 2010), and of course in Christianity (Wright 1990; Dölger 1922, Simoons 1994; Hanson 1997). In the case of Kalaureia, the issue of fish as an offering to Poseidon remains inconclusive, because of the lack of primary contexts of sacrifice containing fish remains; unequivocal evidence of ritual burning on the bones themselves; and the ambiguity inherent in interpreting evidence for dining in Greek sanctuaries; and finally because Poseidon shares the sanctuary with other divinities.

Conclusions

The Kalaureia Research Programs and the excavations in and around the sanctuary of Poseidon have been used as the context for investigating the fishing communities in this area of the Peloponnese and Saronic Gulf over a period of several centuries. The themes explored involve the marine resources exploited, the nature of fishing environments, and the fishing technology used. Additionally, the research has taken a step further in an attempt to outline the identity of the fishermen involved and their cultic ties to the sanctuary. These are issues that are approached through the analysis of fishing-related finds from the excavation of various features in the sanctuary and settlement of Kalaureia, such as fish bones, molluscan and other invertebrate remains, and a range of fishing tools. All were systematically collected and analyzed with these questions in mind, and placed in context within the specific temporal and geographical framework indicated by the find spots, and their meaning and importance has been extrapolated in light of other similar finds from elsewhere in the Aegean.

Fishing in this part of the Saronic Gulf had become diversified from as early as the Geometric period, with evidence that this followed an older Late Bronze Age tradition. Our most detailed picture is for the Hellenistic period, during which time fishermen

tapped a variety of marine resources. Inshore coastal fishing and seashell gathering was the dominant activity in terms of the amount of fish and seafood caught. This type of fishing is technologically complex, requiring a multitude of skills and specialized knowledge. Some of the tools used in this process ended up in the sanctuary, apparently as offerings, and in Building I just outside the sanctuary, either as part of the fishing toolkit of its inhabitants or as items for sale specifically for votive deposition. Inshore fishing and mollusk gathering both result in the catch of a multitude of species, of various sizes, which accords well with the picture that emerges from the fishbone and seashell assemblage from the sanctuary. The rich euryaline habitats that were available in the vicinity of Kalaureia, and the coastal lagoons and marshes that spread along the nearby Peloponnesian coast offered rich fishing grounds for special types of fish, such as the eels and the gray mullets, which were ranked high in the culinary preferences of Greeks of historical times and were apparently also part of the menu that was considered suitable for the sanctuary meals. It is possible that this type of fishing represents a distinct specialized activity that could involve issues of access rights and possibly specialized fishing practices.

Besides inshore fishing and fishing in lagoons, other specialized types of procurement were practiced that must have been important locally, because they provided the raw materials for specific lucrative industries, including tuna (and other Scombridae) fishing, and gathering purple shellfish (Muricidae). In the first case, the capture of the migratory seasonal Scombridae—that is, tunas, bonitos, and mackerels—seems to have been a systematic and well-organized activity in the area, especially in the Hellenistic period. Several lines of evidence imply the existence of local processing installations and thus considerable economic revenues from this type of activity. The second type of specialized exploitation of a marine resource, that of purple shellfish gathering, is also important, because when practiced on a large scale, it is invariably linked to the purple dye industry and the production of prestigious purple cloth. These were apparently part of the economy in the broader area of Kalaureia.

These varied and elaborate sectors of the marine economy in the area of Kalaureia and the nearby Peloponnesian coast are reflected in the presence of their produce and tools in the sanctuary. Remains of fish, shellfish and other marine invertebrates, along with the elements of fishing tools, all imply the involvement of the fishermen and/or their produce in cult. We find evidence of fish and seafood as ingredients in meals, derived from dining that took place in the sanctuary, or associated with ritual consumption. Additionally, certain fish and mollusk remains, such as the purple shells from the cistern (Feature 03), appear to have been offerings in some special yet undefined occasion, as were probably the many fishing implements found throughout the sanctuary. The burned fish bones from some Geometric pits suggest that fish sacrifice or burned offering might also have been practiced.

The presence of similar finds in a building adjacent to the sanctuary, which functioned both as a house and possibly as a shop for food and probably offerings as well,

highlights an additional aspect of the involvement of the marine elements in cult. It indicates that the presence of the fish, shellfish and fishing tools in the sanctuary was not something exceptional but an important aspect of daily life in Kalaureia.

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Appendix 1

List of specialists involved in the analysis of bioarchaeological remains from the Sanctuary of Poseidon at Kalaureia.

Alfaro, C., University of València, Spain: fiber analysis.

Basiakos Y., Laboratory of Archaeometry, National Centre for Scientific Research (NCSR)

“Demokritos,” Athens, Greece: technological analysis of inorganic and organic remains.

Iliopoulos G., Department of Geology, University of Patras, Greece: microfauna.

Isaksson S., Archaeological Research Laboratory, Department of Archaeology and Classical Studies, Stockholm University, Sweden: pottery chemical analysis.

Lymberakis P., Natural History Museum, University of Crete, Heraklion, Greece: microfauna

Mylona D., The Kalaureia Research Program, Swedish Institute at Athens, Athens, Greece: mammal and fish remains.

Ntinou, M., Hellenic Open University, Ioannina: wood charcoal.

Sarpaki A., Independent scholar, Chania: archaeobotany.

Serjeantson D., Archaeology, University of Southampton, UK: bird remains.

Syridis G., Department of Geology, Aristoteleian University of Thessalonike, Greece: mollusks.

Theodoropoulou T., Wiener Laboratory, American School of Classical Studies at Athens, Greece: marine mollusks.

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